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EDITED BY

HAROLD H. KYNETT, A.M., M.D.

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have served their ends in the animal economy.

Chlorophyl, by giving, as it were, specific direction to the vibrations which constitute solar light and heat, tears asunder the atoms of O and C in the compound CO_2 and of O and H in H_2O, freeing O while the remaining elements are appropriated by the plant in the formation of carbohydrates and other compounds capable of reoxidation. Hæmoglobin, on the other hand, supplies oxygen, breaks up the carbohydrates and other oxidizable compounds and forms CO_2 and H_2O.

Electricity, magnetism and chemism are closely related forces, if indeed they be not different modes of manifestation of essentially the same force. They all have the same ultimate basis in the capacity of matter for molecular polarization. Each may be developed by another, each converted into another. The special office of magnetism is to effect transmutations of force.

Most of the elements may be arranged into an electro-chemical series with the alkali metals, potassium, sodium, etc., with hydrogen at the positive, and the halogans, chlorine, bromine, etc., with oxygen at the negative end. Occupying a space in the middle of the series are the metals, iron, manganese and chromium. These metals present a strong resemblance in the variety in color of their oxides and salts, their behavior toward oxygen, their magnetic properties and the fact that they may occupy either the acid or basic side of salts. It is by reason of their position in the electro-chemical series, possessing as they do affinities in opposite directions, that the condition of bipolarity may be readily induced in them and they are hence distinctively magnetic. They are sometimes found on one side of the middle line manifesting acid or negative affinities, sometimes on the other manifesting basic or positive affinities, their difference in behavior depending upon special conditions in the different cases.

The coloring matters chlorophyl and hæmoglobin, by virtue of the iron which exists in them in the magnetic condition, possess the property of polarity. Furthermore, in a state of physiological activity, they are constantly undergoing reversals of affinities or poles. This probably involves a true mechanical, molecular motion, the molecules of chlorophyl and hæmoglobin serving as a mounting so to speak, for the atoms or particles of magnetic iron, and allowing their rotation by the adjustment of their own atoms. Magnetism is dynamic, that is, capable of producing effects, mechanical, electrical or chemical, only when the body in which the magnetic condition exists, or that upon which it acts, is in a state of *motion;* or the magnetism itself is varying, commencing, increasing, diminishing or ceasing, in which case the molecules themselves of the magnetic substance may be inferred to be in a state of motion. Its special office in nature, as observed before, is the transmutation of other forces, changing their directions so to speak, and specializing their activities. A permanent magnet may be viewed as a static condition of force, motion come to rest, yet embodying a capacity to take up motion and convert it into other modes of force.

The property of two-endedness, of right and left-handedness, though difficult to reduce to a distinct mechanical conception, pertains to light and heat as to the other physical forces. Their capacity for polarization, the reduction to definite planes and directions of the vibrations which constitute the essential nature of these forces, indicates their relation to the other polar forces. Faraday has shown that a ray of polarized light or heat may be deflected from its course by subjecting it to the influence of a magnet.

The color green, occupying as it does the middle of the solar spectrum, is interesting in this connection as an index to the capacity which chlorophyl possesses of abstracting the middle constituent, dividing the solar ray, and giving to the vibrations above and below green in the chromatic scale specific directions by virtue of which they polarize and set in motion the atoms of the magnetic metal, iron, contained in the chlorophyl. The magnetization of the the iron with motion superadded, develops electro-chemical force. The condition of polarity and motion induced in the iron is a transitional condition of the force which is received on the one hand as vibratory motion and delivered on the other as electro-chemical force.

This electro-chemical force is expended in tearing apart the atoms of O and C in the compound CO_2 and of O and H in H_2O and becomes posited as it were in the atoms of O on the one hand and of C and

H on the other, to be again delivered up as heat, mechanical motion, muscular activity, etc., when these atoms again meet at the other border of the organic world. This attractive force of the atoms of C and H in the hydrocarbonaceous compounds formed for the displaced oxygen, is the exact equivalent and complement of the solar energy used in parting them and constitutes the ultimate basis of all force manifestation in organic life.

Plants, utilizing the energy of solar light and heat, manufacture out of materials drawn from the atmosphere and taken up from the soil by the roots, a variety of compounds, starch, fats, albumen, etc. A part of these compounds fall from the elevated plane of "proximate principles" to the condition of simple binary compounds, the measure of which retrograde metamorphosis is the amount of CO_2 exhaled by the plant. This descent from a higher to a lower plane liberates force which in conjunction with external heat and acting through the agency of diastase and perhaps other catalytic agents more or less closely related to chlorophyl, lifts another part of these compounds to the grade of organized vegetable tissue. The greater part, however, remains as reserve stores of material and force, to be either used by the plant itself in the construction of parts subsequently developed, or to serve as food for animals.

Animals receive ready prepared for them in the vegetable kingdom, the materials for their structure embodying the capacities for the force evolutions which constitute the expressions of life. True, much of this material is raised to much higher planes, substances of exceeding complexity, of high molecular weight, being required to meet the demands of the extreme differentiation of form and function in the higher orders of animal life. In this lifting of pabulum for the formation and maintainance of organic structure force is consumed, contributed no doubt by the retrograde metamorphosis of other constituents of the food, but rendered available through the agency of so called ferments. Some of these are, in all probability, products of the ductless glands and as yet but little known.

The great and striking characteristic of animal life however, as distinguished from vegetable life, lies in the fact that its chemical processes are, in the main, reductions of matter with evolution of force, which finds expression as heat, sensori-motor force, etc. These reduction processes and force liberations are accomplished through the agency of hæmoglobin and its derivatives, the coloring matters of bile and urine. At the top of the scale of organic nature, we find beginning processes the exact reverse and complements of those we found initiated by solar energy through the agency of chlorophyl in the green leaves of plants. These processes end in the complete restoration to inorganic nature of the matter and forces which have performed their parts in the mystic play of that inscrutable something we call life.

The red corpuscles of the blood, by virtue of the iron which exists in them in some sort of union with their hæmoglobin, take up oxygen from the air in the lungs and deliver it up in the capillary circulation, returning with their hæmoglobin in the reduced condition. In making the circuit from the lungs, through the capillaries and back to the lungs, the hæmoglobin changes from the bright red of highest oxygenation to the violet of lowest reduction, passing no doubt through the whole gamut of colors. When it leaves the lungs, it occupies the red or dynamic end, when it returns to the lungs, the violet or chemical end of the chromatic scale, its color at each stage of the declension being the index to its dynamic capacity. At the point of lowest reduction, its dynamic capacity is a minimum, its chemical affinity for oxygen, after it reaches the lungs, a maximum. At the point of highest oxygenation, its chemical affinity for oxygen is satisfied, its dynamic capacity a maximum. At the opposite extreme of the circuit, this chemico-dynamic force, of which the hæmoglobin in its transit is the vehicle, is reconverted into heat and motion by the impact, as it were, of atoms which had been torn apart by the dynamolytic action of chlorophyl in the green leaves of plants.

Chlorophyl and hæmoglobin, with the other catalytic agencies between them, require for the physiological activity certain necessary conditions. One of these is always heat or equivalent force in the ascending constructive, lifting force consuming series on the one hand; another, the presence of oxygen with its capacity of unlocking force in the descending, destructive force releasing series on the

other. Solar force, either as the direct rays of the sun or as diffused daylight is necessary, furnishing as it does the *vis agendi* for the activity of chlorophyl. This activity, with the processes which depend upon it, ceases in the dark. The permanent withdrawal of light *starves* green-leaved plants to death. It has, however, been experimentally shown that plants will flourish in the electric light which is, after all, but a reproduction of the sun's rays.

Diastase could never imitate and carry forward the process of germination in seeds without the proper degree of *heat*. Heat is also just as necessary for the germination of an egg as for the sprouting of a seed.

The nature and mode of operation of the various substances which serve to transmute heat into constructive energy under the directive agency of animal and vegetable organisms, appear to me to furnish a rich field for study and practical experimentation.

The alkalinity of the blood and tissues furnishes an all-important condition for the activity of hæmoglobin in the animal economy. The alkalinity of the blood differs at the two extremes of the circuit. In the lungs, it reaches its highest degree because of the exhalation of carbonic acid. In the capillary circulation, it becomes less alkaline from the absorption of carbonic acid. In passing from the lungs to the capillaries, hæmoglobin crosses its equator between acid and basic affinities. In returning to the lungs, it recrosses to its region of positive attractions. In the lungs it is electro-positive and unites with oxygen, which is electro-negative. In the capillaries of the various organs and tissues of the body, it becomes electro-negative, repelling the oxygen.

As regards the effect on oxygen, it is essentially an ozonizing process, in which the atoms of O_2, the ordinary condition of oxygen, are disassociated and polarized in the same direction. In this condition they cannot unite with each other though possessing in the highest degree the affinities of oxygen.

It would seem, however, that the alkalinity of the blood, with its changes in degree at the extremes of the circuit, does not absolutely *endow* hæmogoblin with its polarity, or cause of itself alone the reversals of affinities. Blood outside the body will for a time manifest this property, as evidenced by its changes in color from red to purple or purple to red, according as oxygen is excluded or supplied. Even hæmogoblin if extracted unchanged from fresh blood will manifest this property.

An examination into the rationale of the guiacum test for blood shows that even the hæmatin of old blood stains possesses a remnant of this property, inasmuch as it is able to convert the antozone of peroxide of hydrogen into ozone. The basis for the property is beyond question in the essential nature of the iron which is contained. It is well known that a certain oxide of iron manifests, like the black oxide of manganese which has an analogous formula, catalytic activity. This peculiar form of activity, when traced to its ultimate nature, will be found to lie in the capacity of these substances for taking on and giving off oxygen, which capacity is itself dependent upon the magnetic nature of the metals, iron and manganese. When black oxide of manganese is mixed with chlorate of potash in the familiar process of preparing oxygen for laboratory purposes, there is needed but the proper degree of heat, molecular motion, to start or accelerate the revolutions of a multitude of molecular magnets, by which electro-chemical force is generated, which tears the oxygen from its combination in chlorate of potash and gives it off in the free state.

The alkalinity of the blood, however, with its changes in degree at the extremes of the circuit, is necessary to the performance of the physiological function of the red corpuscles, by determining the time and place at which the reversals of the oxygen affinities of hæmogoblin occur, causing them to occur at the opportune moment in each case. In the lungs, where alone oxygen is obtainable, the highest oxygen affinity of hæmogoblin is thereby developed. In the capillaries of the various organs and tissues of the body, where oxygen is needed to meet the demands of the ceaseless change, the highest repulsive force of hæmogoblin for oxygen is thus brought into action.

When the blood-cells die, their hæmoglobin undergoes a conversion into a substance which has been called hæmatoidin, the more complex molecule of the former breaking up and the atoms of C, H, N and O, rearranging themselves into

the simpler molecules of the latter. The iron and sulphur are released and, in part, perhaps reappropriated by young cells, and in part used up in the growth of the horny tissues, hair, nails, etc.

This substance, hæmatoidin, is believed to be identical with bilirubin, the yellow-red coloring matter of bile. Bilirubin has been found in old extravasations of blood evidently produced upon the spot by transformation of hæmoglobin. If red blood-cells be broken up and made to assume a liquid form by alternate freezing and thawing, and the solution injected into the veins of an animal, the operation is followed by a discharge of bilirubin in the urine. Under ordinary conditions, the liver extracts the coloring-matter from the blood-cells as fast as they die, completing their disintegration. Under other conditions, as the introduction into the circulation of certain poisons, or a depraved condition of general nutrition, the cells may die more rapidly than the liver can dispose of their coloring-matter, and jaundice of the hæmotogenous variety occurs, with yellow discoloration of the skin and mucous membranes, and great increase of coloring-matter in the urine.

In phosphorus poisoning, oxygen is abstracted from the blood-cells with such rapidity and to such extent that they are disorganized in great numbers, and this variety of jaundice with ecchemoses, hemorrhages, etc., supervene. In hemorrhagic malarial fever, we have the usual phenomena attendant upon rapid destruction of blood-cells and liberation of coloring-matter. In cirrhosis of the liver, a disease in which this function which the liver has of separating the coloring-matter from dead corpuscles, is interfered with by pressure upon the liver-cells and disturbed circulation, we may have some degree of jaundice and always have increase of coloring-matter in the urine.

With ordinary obstructive jaundice, which results from reabsorption of bile, we are not concerned in this paper.

The coloring-matter of bile exists in *two conditions,* bilirubin and biliverdin, the red and the green matter of bile. The difference between them is one of hydration and oxygenation, biliverdin being derived from bilirubin by the assumption of a molecule of water and an extra atom of oxygen; bilorubin from biliverdin by reversing the process.

Bilorubin Biloverdin

$$C_{16}H_{18}N_2O_3+H_2O+O=C_{16}H_{20}N_2O_5$$

Experiments have shown that bile drawn directly from the bile ducts *during digestion* is green, though reddish-brown when drawn from the gall bladder. If reddish-brown bile be shaken up with air, or exposed to the action of an oxidizing agent as nitric acid or iodine, its color changes to green. Then if oxygen be excluded by placing it in a bottle and corking tightly, the green changes to reddish-brown again. Bilirubin preëxists in the worn-out and dead corpuscles from which it is extracted by the liver, undergoing, however, an immediate conversion into biliverdin while digestion and absorption are in progress. The coloring-matter of bile, in its two conditions of bilirubin and biliverdin, occupies a place midway in the scale between the red coloring-matter of blood and the green coloring-matter of plants, and performs functions related to that of each, taking part in the vegetative processes of nutrition on the one hand, and the oxidations of animal life on the other.

Glucose, $C_6H_{12}O_6$, the product of the digestion of starch and saccharine substances is absorbed from the intestine by the radicles of the portal vein and conveyed to the liver where it is deposited in the form of glycogen or liver starch $C_6H_{10}O_5$, to be again given off in the form of glucose as required for the needs of the system. In the process of being deposited in the liver, glucose undergoes a dehydration into glycogen; in the process of being given off, glycogen undergoes a hydration into glucose.

It is also known that albuminose, the product of the digestion of the albuminous elements of the food, undergoes a reduction in the liver into blood albumin, losing an atom of oxygen. The dehydration of glucose into glycogen and the deoxidation of albuminose into blood albumin are accomplished by the presence of bilirubin which, at the instant of its extraction from the dead corpuscles, undergoes a conversion into biliverdin, appropriating a molecule of water from the glucose and an atom of oxygen from the albuminose. The liver-cells by a selective action upon the glucose and albuminose of the portal vein upon the one hand, and the coloring-matter of worn-out corpuscles upon the other, brings

these substances into intimate relation with each other, effecting the interchange between them of water and oxygen, converting glucose into glycogen, albuminose into blood albumin, bilirubin into biliverdin.

During the intervals of digestion, quite a different circle of events takes place. During digestion, the blood is receiving more glucose from the intestine than is required for the needs of the system, and there is a surplus which is reduced to the form of glycogen, as we have seen, and stored in the liver for future use. Soon after absorption is completed, however, the liver completes its work of reducing glucose to glycogen, and begins instead to give off its glycogen as glucose. Whereas, in the first place, some agency was required to reduce glucose to glycogen, we now need some means to raise glycogen to glucose. This means is supplied again by the accommodating coloring-matter.* There is abundant evidence that the bile continues to be secreted during the intervals of digestion, that it is always present in the intestine, that it is of a reddish-brown color, its coloring-matter being in the condition of bilirubin, and that it is, for the most part, reabsorbed.

Under the changed condition of things, the bile continuing to find its way into the empty intestine, is absorbed into the portal and its bilirubin by the assumption of oxygen from the red corpuscles and water from the plasma of the blood, undergoes a conversion into biliverdin. This biliverdin, when it reënters the liver comes in contact with the glycogen and yields up to it its water, becoming reconverted into bilirubin and reconverting the glycogen into glucose, thus rendering it again diffusible when it is swept off into circulation. The atom of oxygen associated with the molecule of water in the biliverdin and liberated with it, is no doubt applied to the final oxidation of nitrogenous substances which have served their ends in the economy, of which reaction the urea found in the liver is the product.

The liver may be regarded as a chemico-vital laboratory in which certain elements of the food are prepared for assimilation, while other substances which have yielded up their capacity for meeting the demands of structure and function are prepared for elimination. In this laboratory the reagent effecting the changes is the coloring-matter, acting under the same conditions of heat and oxygen supply which are necessary for the activity of other allied substances above and before it in the scale.

COMMUNICATIONS.

CHLORAL HYDRATE—SOME OF ITS USES.†

BEN. H. BRODNAX, M. D., Brodnax, Louisiana.

In conversation with physicians at various times, I have noticed they viewed chloral as merely a hypnotic, and had used it only for the purpose of relieving pain, thereby inducing sleep. I have been a little surprised at this want of knowledge of its other equally valuable properties. Early in my practice I tried to make a few medicines, combined or by themselves, do all that they would for me, and was led into experimentation with them. Chloral came in for its share, because it relieved pain, quieted the nervous system, and did not paralyze the bowels.

As a *hypnotic,* five grains of chloral combined with laudanum or with one-eighth or one-quarter grain of morphine acts splendidly, the combination intensifying the effects of each and depriving the opiate of its stimulating property. With children by itself, in sweetened water, it has no equal ; mixed with paregoric, it is also good.

I *prepare* it as follows : I just cover the amount in my case vial with glycerin—this dissolves it, and a drop is about a drain. In this form it mixes readily with oil or water and is more quickly prepared, and more easily divided into doses, large or small. With castor oil the dose one to

*The liver's work of breaking up dead corpuscles goes on, notwithstanding the necessity as well as the conditions for forming *green* bile have ceased.

†Read before the Philadelphia County Medica Society by Oscar H. Allis, June 13, 1894.

five grains renders it less nauseating, and does not grip, at the same time producing quiet and rest.

Applied to the skin in eruptive diseases —measles, urticaria—as follows: chloral, 10 drains (drops); carbolic acid, 10 grains (drops); water or oil, 1 to 2 ounces, almost instant relief is experienced of the intense itchings. Or chloral, 10 drops; glycerin and water, each ½ ounces, produces the same effect.

As a mouth-wash: Chloral, 10 grains; glycerin and water, each ½ ounce (a teaspoonful), produces a pleasant cool sensation in salivation, or as a gargle. After holding it for a moment in the mouth it should be rejected and an equal amount of the fresh solution may be swallowed. Carbolic acid (10 drops) added, makes it more effective in ulceration of the mucous coverings. It seems to act on the nerves locally, the same as chloroform by inhalation does on the body.

In toothache: Chloral, camphor, glycerin, carbolic acid, equal quantities, applied on a small piece of cotton after cleaning the cavity will relieve the pain. (Cover with more cotton to fill the cavity). I keep the mixture, ready made, under the name of "Toothache drops," in my medicine case. If the patient has lost sleep I give a full dose of chloral by the mouth.

For ulcerated sore-throat, or ulceration from any cause, such as scalds: Chloral, 10 to 15 drops (grains); water, 1 to 2 ounces, as to age; sugar, to make it palatable to children, a teaspoonful, repeated at short intervals until sleep is induced, then on waking to keep them fully under its influence. My first experience was on my only daughter, four years old. The case was so severe I feared I would lose her, and to get rest for her, gave as above, after having tried everything else I knew of. The almost immediate relief of all the bad symptoms led me to think the medicine acted *otherwise than merely as a rest-producer*. Since then, for ten years I have used it with the utmost satisfaction to myself and patients.

Earache: Camphor, 10 grains; chloral, 10 grains; carbolic acid, 10 grains; castor oil, ½ ounce. Drop into the ear warm. Fill the ear full, apply a piece of cotton wet in warm water to fill the external ear, then a cloth wrong out in hot water as warm as can be borne. I have seen some almost crazy children go to sleep in two or three minutes and awake free of their troubles.

As an aid to chloroform in surgery or obstetrics, 10 to 15 grains, given twenty minutes before administration of the anæsthetic, seems to intensify the effect and less than one-half of it is needed to produce the desired effect. In my obstetric practice for the last fifteen years I have used it, and have observed but one case where any unpleasant effects were induced. This was a woman with her tenth child. I gave the choral to relax the system, 10 grains; in half an hour 5 grains more; in half an hour the chloroform. It affected her almost immediately and the child advanced and came away in good style, but the woman seemed to be dead drunk and incapable of moving herself. She slept soundly for several hours and awoke all right. She was conscious and would answer questions, but could not use herself. This was the first time she had taken either of the drugs, and she may have been susceptible—easily affected. Chloral, given before the anæsthetic, seems to tide them over the excited stage of anæsthesia. The first few whiffs of the anæsthetic produce quiet without any excitement. I have used it in a few surgical cases with the same effect. In children a full dose of chloral, and when sleep comes on they are anæsthetized in that state, and the force often necessary, otherwise, is avoided.

In coryza, where the Schneidering membrane is very irritable, chloral, 10 grains (or drops); castor oil, ½ ounce, used with a soft mop, applied over the surface, after being dried, acts to check the excretion of mucous, and lulls the irritation and the head-pains.

The supposed influence of the drug on the heart has been urged by my friends against its use. I have not seen any unpleasant effects. In any case where there is a chance of any cordiac trouble, it is an easy matter to fortify the heart with a $\frac{1}{50}$ gr. of nitroglycerin. In one delicate woman I did this as a precaution, but even in her case I believe it was not necessary. This summarizes my experience with chloral, and when I tell you I use from five to six pounds a year, you may know that it has a very considerable scope. I never prescribe it in any quantities, so as to create a "habit." In fact, I do not know of a single case of the kind.

RECTAL ABSCESS.*

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I have chosen as a theme for a short paper to-night a subject which may appear at first glance too insignificant for your consideration, but I am sure that it demands serious thought from a surgical standpoint.

It is for the very reason that too little consideration is given abscesses in a general way, and rectal abscesses in a special way, that I desire to bring the subject before the Society this evening. It has been my misfortune to see one patient die from the effects of a rectal abscess, and several others barely rescued from a fatal result from the same cause. It is the common, too common, observation of the surgeon who sees much rectal practice, that abscesses in this region are treated by the physician in a very unsurgical way. Indeed, it seems to be the common practice to instruct those in charge of such cases to avoid all means looking to an early evacuation of pus, but on the contrary to allow nature to do the work of evacuation. In other words, to poultice the threatening abscess until it bursts. From such advice I have seen more than a score of patients that not only had run the risk of sepsis, but had been made invalids for life. If there is one surgical precept that should be taught in preponderance above another, it is, that pus should be evacuated as soon as discovered. Indeed, I believe that the surgeon is justified often in cutting down upon this inflammatory tumor when he *suspects* pus, but has no positive evidence of its presence. I would rather cut into such a tumor and find no pus than to allow an ounce of it to remain in the tissues twenty-four hours. This rule holds good whether the abscess be a cold or hot one, whether it is due to acute conditions or can be traced to a special diathesis, as tubercular, etc. I could not imagine a case better suited to bring discredit upon the physician, or to form a basis for a malpractice suit, than to allow an abscess to burrow for days or weeks, as is often done, around and through the tissues of the rectum. If a patient escapes constitutional infection he runs the risk of such local destruction as will make him an invalid for life. Recognizing, then, the necessity for an early evacuation of rectal abscesses, I have only to call your attention to the manner that is usually practiced in opening them. I believe that you will bear me out in saying that the common practice, even with reputable physicians, is to *puncture* these abscesses. It does seem that men, who would not hesitate to amputate an arm or leg, will not only hesitate about opening abscesses around the rectum, but when they do so the smallest instrument possible is used for the purpose. Many patients have told me that a needle was used by the physician for the purpose; and if a knife was used, it was one with the most delicate blade.

In this connection you will permit me to refer to a few cases that I have now under observation:

Case 1. A young lady, aged twenty-three, was brought to me several weeks ago from a Southern state, giving the following history: About eighteen months ago she gave symptoms of a rectal abscess. A physician saw her, and so pronounced her trouble. The swelling was great, and the pain nearly unbearable. She begged that the abscess be lanced, but her physician informed her that it was not *ripe*, and that she must wait. Three weeks' time was consumed in this waiting, and at last nature accomplished her work and the abscess *broke*. Of course poulticing was kept up both before the bursting of the abscess and after. After inflammatory action had subsided the doctor proceeded to treat the fistulous condition, which of course resulted. An injection plan was inaugurated, iodine, carbolic acid, etc., being the agents that were thrown or injected into the sinuses every few days. The result of this treatment was that a second abscess resulted, this time in the other buttock. This too, was allowed to *take its course*. After she recovered from the second abscess she refused further treatment, and came to me. You can very well imagine the condition in which

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I found her. A young girl only twenty-three years of age, handsome, prepossessing, and otherwise healthy, crippled beyond measure by this bad and ill-advised treatment. Upon examination I found on one side two external openings, which led into fistulous sinuses, measuring six to eight inches in length, and running in different directions. On the other side I found the buttock entirely riddled with sinuses, cavities, etc., and communicating with the bowel at great depth. The operation necessary to cure this girl required the most extensive wounds and a three months' stay at the Infirmary. The sphincter muscle being the objective point, it required the most careful surgery to preserve it.

Case 2. A young man, aged twenty-four, came to me from a distance. Upon examination I found a large, patulous, indolent ulceration around the rectum. The finger could be run into a cavity fully four inches, and under the flaps of skin to a distance of two inches in different directions. He gave the history of a cold abscess, and the condition I saw was plainly tuberculous. I advised an immediate operation, which consisted in the complete removal by knife, scissors and curette of all tuberculous tissue.

The recital of these two cases will be sufficient for me to base a few remarks upon in regard to the treatment.

There are two things that should be scrupulously followed by the physician having in charge a patient suffering from rectal abscess, viz., early evacuation of pus and free drainage.

Considering the great percentage of cases of this kind that end in fistula, it is the duty of the surgeon to prevent that calamity, and the time to do it is while treating the abscess, which is always the forerunner of the latter. Considering, too, the local ravages that both abscess and fistula make, it is little less than criminal to allow such to occur when the prevention can be so easily practiced. To the layman or the uneducated doctor it may seem preposterous to propose that a patient suffering from a rectal abscess should be chloroformed and operated on, but to the surgeon of experience or a pathological student it would appear eminently proper. In every case of rectal abscess I would suggest the following plan of treatment:

Just as soon as pus is detected, or the surgeon has good reason to suppose that it is present, the patient should be informed of the necessity of a free lancing of the abscess to avoid sepsis or fistula in ano.

Having administered a purgative, and the parts thoroughly cleansed, the anæsthetic should be given, and with a large knife a free incision should be made into the structures. This, of course, causes a free evacuation of pus. An irrigator should be ready with a 1 to 5,000 mercuric solution, and the cavity thoroughly washed with the same. The surgeon's finger should now be introduced into the abscess cavity, and all bridges, loculi, etc., broken down, when a free injection of peroxide of hydrogen should be practiced. A dilator should now be inserted into the rectum and the spincter muscle freely divulsed. Iodoform gauze should now be introduced well into the cavity, cotton applied, and a T bandage, and the patient put to bed. On the second day these dressings should be removed and the cavity syringed by sol. mercuric or peroxide of hydrogen, and gauze inserted as before. This should be kept up each succeeding day until the cavity has closed and wound healed. No poultices of any kind should be allowed to be applied after the abscess has been opened.

It can be definitely asserted that if this course is pursued in cases of rectal abscess, fistula in ano would become one of the most infrequent of rectal affections, whereas, now, it is claimed by some to be the most frequent. It will be noticed that I have suggested the free divulsion of the sphincter muscle while operating for the abscess. This is done in order that the spasm which naturally affects the muscle during the existence of an abscess be done away with. The contracting of the muscle inordinately at this time would prevent good union, when by resting it everything is made quiescent.

The injunction not to use poultices after lancing can be appreciated by all antiseptic surgeons. If heat is necessary, hot sterilized cloths can be used; however, the tension being relieved by the cut, but little pain is afterward suffered. The old idea was that by poulticing a free discharge of pus was secured, and that pus was so necessary in those days to the healing of wounds.

NEW METHODS EMPLOYED FOR THE RELIEF OF IMPAIRED HEARING, ESPECIALLY BY THE USE OF THE PHONOGRAPH, VIBROMETER, VIBROPHONE, AND METRONOMIC EAR MASSEUR.*

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I present this short paper in order to direct attention to a comparatively new way of treating the ear, with a view of restoring or benefiting defective hearing, and dissipating tinnitus.

Contrary to former beliefs, hearing is not to any great extent dependent upon the integrity of the drum-head, but rather upon the preservation of the proper relationship of the various parts of the sound-conducting apparatus. It is now known that if the external meatus be clear and the auditory nerve intact, not only may the membrane be perforated but even extensively destroyed, provided the chain of bones be normal and in perfect adaptation, the hearing will be perfect. To illustrate this, I call attention to a case I treated in 1883. In a case of long-standing suppuration with extensive granulations, I succeeded, upon the careful and complete removal of the granulations, and the subsequent subsidence of the middle-ear inflammation, in retaining Shrapnell's membrane, with the chain of bones, in perfect position. The consequence was that the hearing for the voice, as well as metallic sounds, became perfect and has so remained.

Perfect hearing depends then upon the exact balance of the ossicles one to the other, and to their proper relationship to the oval window and drum-head, between which they are suspended. If any or all of these parts are abnormal in any way—as, for instance, as to the weight of one or more of the bones, or if there be any abnormal attachment between the ossicles, or between the stapes and oval window, or any attachment of the drum-head to the inner wall of the middle ear—there will be derangement of that nicety of adjustment, that perfect balance which is necessary to good hearing.

The membrana tympani may be considered as little more than the outer fixation point of the ossicles—as a protector for the middle ear, in small part, aids the hearing by concentrating all sounds and upon the short process of the malleus.

Seeing the necessity for perfect freedom of motion in this sound-conducting apparatus, we can readily understand the importance of preventing or, should such exist, removing any attachments of these bones to each other or to the surrounding parts. Any effusions upon them—effusions even if unattended by the formation of attachments—may occasion over-weighting of some of these delicate bones, and thus interfere with the proper conductibility of sound. Should these unfortunate conditions occur, we then have impaired hearing, and usually a greater or less degree of tinnitus.

Numerous operations and methods of treatment have been devised for these cases. They aim either to restore the parts to a normal condition, or to conduct the sound directly to the oval and round windows without the intervention of the ossicles. This latter was accomplished either by perforations or destruction of the drum-head, or the removal of one or more of the ossicles, with or without the drum-head. Since Schwartze first removed the drum-head and malleus in 1873, until the present, operations on the ossicles have become more and more frequent, until recently we find one writer reporting some 300 cases of these operations in about two years. Most operators remove the drum-head with one or more of the ossicles, but Jack removes the stapes alone without the drum-head, evidently reasoning that as ankylosis exists almost always at the juncture of the stirrup in the oval window, by thus removing the stapes the sounds will be carried directly to the membrane of the vestibule. I have performed excision with the removal of one or more of the ossicles but twenty-three times. I, however, do not think it should be resorted

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to until all other methods to restore mobility have failed. In future I intend to perform it only in such cases as, where after prolonged, careful treatment, especially after the thorough use of the instruments I will show you to-night, I fail to relieve distressing tinnitus or very defective hearing. I will then perform it only as a last resort, as when the ossicles are gone and there is no improvement, there is much probability of future help.

Massage methods, or methods to break up adhesions within the middle ear, may be said to date from the time that Guyot reported the invention of the Eustachian catheter to the Paris Academy in 1724. He not only opened the Eustachian tube, thus relieving the tension of the membrane and ossicles, but forced air through it into the middle ear, thus forcing the membrane and ossicles back into their normal position, loosening or breaking any attachments that had been formed. The methods of Valsalva and Pliotzer were but applications of Guyot's idea, their object being the same.

It is, however, not of these methods which operate through the Eustachian tube, but of such methods as exert their beneficial action by increasing and diminishing pressure on the membrane and chain of bones, through the external meatus, to which I will call your attention to-night.

Massage methods as applied to the ear can be separated into phono-massage, the massage occasioned by sounds; pneumo-massage, that occasioned by the condensation and rarefaction of air in the meatus; pressure-massage, where direct pressure is applied to the membrane or ossicles, and mixed massage, a combination of pneumo- and phono-massage.

Probably the first method employed to produce massage was by means of the open hand, so adapted to the ear as to produce a suction effect, alternately pushing and removing it with a slightly sliding motion. This method, as well as the one of opening and closing the meatus by the use of finger, as we often see swimmers do, was undoubtedly practised by the ancients.

Cleland in 1771, recommended the sucking of air from the external meatus for therapeutic purposes, but it was later forgotten until Moos brought the method of rarefaction of air in the external meatus again into use as a means of treatment. A method formerly employed was by means of the suction of a syringe, with an olive-shaped tip. The tip having been adjusted to the meatus, the piston was drawn back, and, by means of the vacuum produced, the membrane was drawn outward; hemorrhage and even rupture of the membrane was often thus occasioned.

The first scientific instrument to accomplish massage, the Siegle otoscope or pneumatic ear speculum, was presented to the profession in 1864. This instrument was followed by the fungoid-shaped balloon of Lucae, and the rarefacteur and masseur of Delstanche. Siegle's otoscope consisted of an air-tight ear speculum closed without by a glass plate, and connected with a tube to which a mouth-piece was attached. By inserting the speculum the membrane could be examined and its movability determined by motion of the mouth. By alternate suction and condensation, massage was accomplished. Lennox Browne improved the instrument by substituting a rubber bulb in place of the mouth-piece, Delstanche substituted a small double-valved air-pump, and then called it the rarefacteur. Later, Delstanche used a tube, inserted into the meatus, and produced rarefaction and condensation by means of a small hand-pump, capable of regulation, calling this the masseur; but in this instrument he omitted the speculum and thus was unable to see just what effect he was producing. Lucae about this time began to use massage directly on the short process of the malleus by means of this elastic pressure sound, alternately pressing and relieving the tension.

In 1884 Sexton used double ear tubes as a method of education of those suffering with defective hearing, apparently unconscious that he was on the threshold of an important discovery. It is of this instrument that Spear said: "It was invaluable to stimulate the auditory nerve whose functions have become impaired by disuse." It remained for Currier to discover that, not only was it a good teaching method, but that the hearing often improved. These were, so far as I know, the first applications of phono-massage.

In 1887 Maloney presented the otophone to the public. This was nothing more than a speaking-tube closed at one end by a diaphragm. He used it not only as a speaking-tube, but also as a method of im-

proving the hearing, by means of the massage it effected on the drum-head and ossicles.

In 1891 Garcey commenced to use the phonograph to improve the hearing; he was followed by Leech and Houghton. Instead of using the ordinary records, they used cylinders with lines made not by sound, but graved more or less deeply. In 1893 McFarlane used the phonograph, with the ordinary cylinders, for the same purpose.

In 1892 Garcey commenced to use a string instrument—the sounds made by the vibrations of the strings of a banjo being conducted to the ears—which he called the vibrometer. This instrument has been very much improved of late, and now consists of four strings stretched over a banjo-frame. The strings are set in vibration by a pronged wheel which, as it revolves over them picks the strings, the sounds being carried to the ear by the ordinary double ear tubes. One string can be thus played, or two strings may be kept in vibration. In addition to this, the instrument is provided with a suction apparatus. There is a diaphragm in an air-tight cavity within the banjo-head, which is moved up and down by the motion of an eccentric on the shaft, and connected with this cavity is a pair of double ear tubes. You are supposed in this way to be able to obtain simple massage, but as a matter of fact there is a great deal of noise traveling into the ears as long as the machine is in motion.

The vibrophone is an instrument introduced last year, the purpose of which is to carry to the ear the sounds of a rapid or slow interrupter of an induction circuit, as well as to produce, at the same time, a distinct change in the air pressure on the drum-head. As originally constituted, it carried sound only, but has been modified as above at my suggestion.

Wilson has used the telephone for the production of ear massage. Semrock has used the tuning-fork for the same purpose. Hundreds of others have experimented with the tuning-fork in the same direction.

Before describing my own apparatus, I will briefly refer to the methods mentioned. The old mechanical methods of applying massage by the hand produced good effects but were crude. Cleland's and Moos's methods labor under the same disadvantage. The Siegle speculum, the rarefacteur and masseur are all of value, but they cannot be continued as long as many cases demand, nor can they be as carefully regulated as desirable. Sexton's conversation tubes are of value, as is likewise Maloney's otophone, but they are conductors of sound and sound vibrations, and while they independently of this yet produce motion of the membrane and ossicles, this is not capable of exact regulation, nor is there any way of using massage without the sound. This same objection holds also so far as the vibrometer and vibrophone are concerned; neither of them gives massage without sound, although the vibrometer is supposed to answer these requirements.

It seems reasonable to suppose that in some of these cases of defective hearing associated with more or less immobility of the sound-conducting apparatus, the auditory nerve may be exhausted or diseased. We find it so in mill hands and in boiler and sheet-iron workers; their auditory nerves become at first over-stimulated, and later exhausted. In treating such cases, as well as in hyperæsthetic conditions of the auditory nerve, as little sound as possible should be transmitted for fear of occasioning further damage. To treat such cases I found silent or simple pneumo-massage was required. To accomplish this, I constructed a machine in which I had a slow and fast interruptor in connection with an induction coil, and connected with this was an air-tight telephone with a double ear-tube. Each make and break of the current causes a to-and-fro motion of the telephone diaphragm, and this occasions a corresponding motion of the ear drum. Later, I began to use instead of my induction coil interruptors, a metronome to make and break the current, and find it better in every respect. With it I can produce anywhere between forty and two hundred and eight to-and-fro motions of the drum membrane per minute, the amplitude of motion being dependent upon the size of the diaphragm and strength of current, both of which I can regulate. I have called this instrument the metronomic ear masseur.

For some two months I have been experimenting with the phonograph, both as an ear-test and as a remedial agent. For the former purpose I have found it the most accurate and the best test I have

at my command. As a remedial agent, especially for the application of phono-massage, I have found it very valuable. For this purpose I use voice and instrumental records as well as mechanical records. By this I mean records that have been produced by cross-lining the cylinders, or regularly grooving with lines parallel to the axis of the cylinder (making the lines on some cylinders deep, on others shallow; on some close together, on others far apart).

The work with the phonograph has not progressed sufficiently far to allow me to speak as to its true scientific value. I can only say that it has, in my hands, proven to be by far the best phono-massage instrument I have employed, as sounds of any desired pitch or quality, and practically of any required volume, can be thus obtained.

To illustrate the effects of these new instruments (I refer especially to the vibrometer, vibrophone, phonograph, and the metronomic ear masseur) I will present to you but a few of the one hundred and fifty-three patients that I have treated by this method; two of these patients I have here this evening.

In order to disarm those who would contend that the improvement in hearing was in no wise connected with the massage treatment, I would say that I treated some thirteen patients by this method alone with universally good results; and out of some twenty-eight patients whom I had treated in the ordinary manner, without improvement, but on the addition of massage to the previous treatment all but three improved.

In presenting to the State Medical Society a paper on this subject, I classified my cases as follows: Series I. Those who had been treated by me without improvement, and who improved upon the addition of massage treatment. Series II. Those treated by massage alone—all improved. Series III. Those treated by the combination of massage treatment with ordinary local and constitutional measures. Series IV. Deaf-mutes—two cases only, both improved. Series V. Those treated by usual measures with addition of massage without appreciable benefit; of these there were but six in the 153 cases.

I will narrate but one case of each class.

SERIES I., Case 3.—Mr. C. Z., aged seventy-seven years, treated by me in 1884 for eight months; no marked improvement. He has been affected since 1869. He returned to me March 27, 1894, membranes very much thickened with lower half adherent to promontory; watch not heard in either ear, conversation not heard; only hears upon being talked to in ear, and then only with great difficulty. For the past year or two, unable to distinguish the piano tones; has been an expert pianist. After daily treatment for twenty days he informed his friends of his improved hearing, and remarked that for the past two days he can again enjoy the piano, being able to distinguish the tones.

SERIES II., Case 9.—Mr. J. S. S., aged sixty-five years, came March 19, 1894, with great loss of hearing and tinnitus, extending over a period of twelve years—voice-hearing poor. Watch: right ear, three inches; left ear, hard contact. Two treatments a week for three weeks gave him marked improvement of voice-hearing; with watch-hearing, right and left ears, of seven and five inches respectively; tinnitus heard only occasionally.

SERIES III., Case 19.—Mrs. R. W. K., aged thirty-eight years, came March 5, 1894 (a case in which about two years previously I had given the opinion that I did not think I could improve her hearing). Both membranes had large perforations from scarlatinous otitis suppurative thirty-seven years ago; had for years noticed a gradual diminution of hearing. Hearing for voice very poor, watch not heard, tinnitus deep in character. Treatments were given every other day. April 24th she heard a thunder-clap, a sound which she had not heard before for fifteen years. May 9th she heard a dynamite explosion (quarrying) some four miles off. May 17th. Watch: right ear, eight inches; left ear, fifteen inches+; voice-hearing fair. Her friends have been so astonished at her markedly improved hearing that I have heard of this case in many quarters.

SERIES IV., Case 25.—Two cases of deaf-mutes very much improved. Miss E. G. came January 28, 1894, with history that when eighteen months old she had scarlet fever; that the ears were painful; that lymphatic glands below ears enlarged and opened; that from this time on she heard apparently nothing, but felt violent jars only; that she has endeavored to

utter sounds which seemed to resemble words; that two unfavorable opinions had been given by specialists on the case. By careful treating I arrived at the conclusion that the auditory nerve endings were, at least to some extent, sensitive; that however, it took a powerful sensation to excite them, and that it took a long time for a sound message to be perceived by them. For a month I used the usual treatment for such cases. On February 28th I commenced the use of phono-massage and mixed massage, and later pneumo-massage was applied twice a week, and now she can readily hear my watch tick, hears the friction cards easily, and the tuning fork annoys her by reason of the intensity of sound. Voice-hearing is not good, but she hears a loud voice if words are slowly uttered (sluggishness of perception of auditory nerve), and she has increased her vocabulary from *nil* to several hundred words, and is now able to converse with other children quite readily, as well as with her parents.

Series V., Case 27.—Miss S. B. came March 15th with history of catarrhal middle ear disease of twelve years standing; tinnitus has been constant for ten years; she has been treated for periods of a year or more by two Philadelphia specialists, but with no material improvement. The membranes are very much thickened and the lower portion is adherent to the promontory. Voice-hearing very poor, watch not heard, friction cards heard occasionally only. After treatments the only change has been a lessening in the frequency of the sounds; they are no longer constant. The case is one of atrophic catarrh.

I will take the liberty of calling attention to another case which illustrates that the improved hearing is not a temporary affair lasting for a few minutes or hours, but that the change for the better is a permanent one. I refer to Case 24.

Case 24.—Miss G. R. B., aged twenty-two years, came May 3d, with a history of catarrhal disease of middle ears of five year's standing. She had upon three occasions placed herself under the care of specialists in New York and Philadelphia without satisfactory results. The voice-hearing was poor, except when aided by lip reading. Watch: right ear, half inch; left ear, hard contact. Both membranes were retracted, lustreless, and thickened; very little movement of the membranes could be observed with Siegle speculum. After usual local treatment there was no discernible effect upon the ears; after the use of pneumo-massage for thirty minutes there was a slight increase in hearing, watch being heard—right ear, three inches; left ear, two inches. Two days later, on testing, I found her watch-hearing to be: right ear, two inches; left ear, one inch. After pneumo-treatment, this rose to: right ear, four inches; left ear, three and a half inches. Two days later on testing her, found hearing to be three and a half inches right ear, three and three-quarters inches left ear. After the treatment the hearing rose to: right ear, five inches; left ear, four inches. Two weeks later, May 14, she heard on arrival in Philadelphia, in right ear, three inches +; left ear, two and a half inches +. After treatment, right ear, four and a half inches; left ear, four inches.

It is evident, from what has been said, that massage is a method which will prove of value in the treatment of diseases of the ears, that it will in many cases obviate the necessity of severe operations, and give better results. Unlike these operations, the parts are left intact, so that should massage fail there is still an opportunity for further measures.

It may be applied by any one of four methods which, for convenience, although not strictly accurate, may be termed: 1. Pneumo-massage; 2. Pressure-massage; 3. Phono-massage; and 4. Mixed massage. The method to be employed corresponds to the case in hand; the caution to be observed is, in cases where the internal ear is affected, not to use too violent pneumo-massage, nor too shrill phono-massage, but to apply it most carefully, as otherwise there is danger of labyrinthine hemorrhage.

The time the massage is to be employed varies greatly with the variety employed, and the nature of the case in hand. Pneumo-massage can be used from two minutes in acute cases, to as much as an hour in chronic cases; and from about one minute when the shrill phono-massage is used, to fifteen minutes when the sounds are deep bass tones or are of small volume.

Of course, constitutional and other local treatments are as necessary when this method is employed as without it, although you will observe from my cases here quoted, that cases which had been treated and

thoroughly treated, and yet failed to improve, improved steadily when the massage treatment was adopted. In other cases where the regular ear treatment occasioned no change, the patient was transferred to the massage treatment, and improved markedly in a few treatments.

The following conclusions are a natural inference from the work herein portrayed.

1. Poor hearing, when unconnected with closure of the meatus or disease of the nerve, is usually the result of some want of mobility in the sound-conducting apparatus.

2. This want of mobility can almost always be overcome by the use of massage, especially pneumo-massage applied directly to the membrana tympani or ossicles.

3. That the pneumo-massage in ordinary cases is the most serviceable, phono-massage being especially indicated where there is a necessity of exciting the atony of the auditory nerves caused by disuse.

4. That as the mobility of these parts increases, the hearing is restored and the tinnitus disappears.

5. That the results are most favorable in cases of hypertrophic catarrh, and in cases with retracted and perforated membranes following suppuration; less favorable in the proliferous variety of catarrh; and unfavorable in the atrophic variety and in cases of involvement of the auditory nerve-ending.

6. That the treatment will in great part supplant the removal of the ossicles and similar operations, which operations should never be entered upon for the restoration of hearing or the removal of tinnitus until massage methods have been given a thorough trial.

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Fatty Heart.

In a case of emphysema, accompanied by a fat-laden heart and attacks of spasmodic bronchitis, M. Albert Robin (*La Med. Mod.*) ordered:

℞

Sodii arseniat	gr. 1-64
Pot. iodid	gr. ¾
Pulv. nucis vom	gr. ½
Pulv. rhei	gr. ¾
Extr. dulcamar	gr. iss

M. For one pill. Sig.: One pill daily.

—*Medical Bulletin.*

TRANSLATIONS.

THERAPEUTICAL SUGGESTIONS FROM FOREIGN JOURNALS.*

SELENIUM AS A REMEDY LOCALLY.

Dr. Ch. Féré and Demontporcelet (*Wiener Medizinische Presse*, No. 23, 1894) have found selenium to be much more poisonous than sulphur to which it is chemically related. It must first be carefully experimented with before it can be employed internally. In certain skin diseases it will be found to yield much better results than sulphur under the same circumstances. It is a red amorphous powder and is employed under the form of precipitated selenium. They advise the following formula:

℞ Amorph. precip. selenium..... 2 | 0 (grs. xxx)
Pure vaseline.....30 | 0 (℥j)
For external use.

IODOFORM IN FIBRINOUS RHINITIS.

Dr. M. Vladár (*Pester Med.-Chirurgische Presse*, No. 16, 1894), in a case of fibrinous rhinitis where every means employed seemed to be without effect, insufflated iodoform well into the nostrils after previous irrigation, allowing the patient to respire deeply in order that he might draw it well in, and he was surprised with the results obtained. That night the patient slept for four hours and his nose did not become dry, the tense feeling diminished and the difficult swallowing decreased. The following morning all exudation had disappeared and only a sharply outlined and a but slightly bleeding raw surface remained, which soon healed under treatment by iodoform. No new exudates formed. Since then he has treated five cases with this remedy exclusively and concludes that iodoform is a specific in this disease. This method is to be continued as long as there is any sign of new membranes forming. As the results are rapid, dermatol or the subnitrate of bismuth may be employed to assist granulation. Sometimes one must have recourse to cocaine in order to diminish the sensation of tension and the irritation. No disagreeable effects from its use were observed.

* In charge of the Translator, F. H. Pritchard, A. M., M. D.

IODIDE OF RUBIDIUM.

Prof. Neisser, (*Therapeutische Monatshefte*, No. 5, 1894) claims that this iodide is better tolerated by the stomach, the circulatory and the general system, than the iodide of potash. Its taste is more pleasant and milder. Prof. Schoeler finds it of advantage in elderly people, with diseases of the circulatory system. In several cases where the potash salt was badly borne, this preparation, if carefully used, was tolerated. Prof. Bunge has a favorable opinion of the remedy. The symptoms of iodism do not appear as soon nor as prominently, as with the potassic salt. It caused no gastric disturbances. Employed locally, by instillation, as a 5 per cent. solution in eye diseases, it acted well. Prof. V. Mering states that the iodide of rubidium is better borne and furnishes the same results as the iodide of potash, as it does not disturb the stomach. He thinks it especially indicated in debilitated individuals, with weakened heart's action. Dr. Braunschweig, Dr. Leistikow and Prof. Wolff, also claim for this salt a better action than from the potash compound. It forms white, ordorless crystals which are soluble in water. The dose is the same as that of the potash preparation:

℞ Iodide Rubidium,..... 5 | 0 (℥j grs.xv.)
Destilled Water.....200 | 0 (℥vj. ℥ij.)
A tablespoonful three times a day.

ICHTHYOL IN GONORRHOEA.

Dr. Villetti (*Journal De Medicine De Paris* No. 21, 1894) from a numerous series of observations concludes that ichthyol is of service in the treatment of gonorrhœa on account of its being antiphlogistic, analgesic and germicide. He also praises it in cystitis. In gonorrhœa he employs injections of a 5 per cent. solution, while in cystitis a weaker one (1 per cent.) is used.

Diphtheria.

℞ Carbolic acid..... gtts. viij
Liq. sulph. iron..... ℥ij to ℥iij
Glycerine..... ℥i
M. Sig.—Apply to fauces with camel's hair brush two or three times daily.

—*Dr. J. Lewis Smith.*

CORRESPONDENCE.

NOTE ON HYDROPHOBIA.

EDITOR OF MEDICAL AND SURGICAL REPORTER:

SIR:—Apropos of Dr. Hiram Corson's recent articles in the REPORTER upon the subject Hydrophobia, I herewith direct attention to a method of treatment said to have been highly esteemed during the first quarter of the present century. Placed side by side with modern therapeutic methods, Pasteurism for instance, it savors of the ridiculous, nevertheless it was considered of sufficient value to merit recognition from the Legislature convened at Albany, February 28, 1806. The following as a verbitum copy of an article taken from in Albany, paper bearing date March 24, 1806.

State of New York, Comptroller's office.

Pursuant to the directions of an act entitled, "An act for granting a compensation to Jno. M. Crous, for discovering and publishing a cure for the hydrophobia, or canine madness, passed the 28th of February, 1806, I do hereby certify, that the said John M. Crous hath this day deposited in this office a certain writing, purporting to be the remedy used by him with perfect success, for more than twenty years past for the cure of the hydrophobia or canine madness, which writing is in the words and figures following to wit:

CURE FOR THE BITE OF A MAD DOG.

"The following is an account and prescription of the remedy and cure for the hydrophobia or canine madness, made by John M. Crous, in conformity to an Act of the Legislature of the State of New York, passed at their present session, viz:

1st. Take one ounce of the jaw bone of a dog, burned and pulverized, or pounded to fine dust.

2dly. Take the false tongue of a newly foaled colt; let that also be dried and pulverized—and

3rdly. Take one scruple of the verdigrise, which is raised on the surface of old copper by laying in moist earth; the coppers of George I or II are the purest and best. Mix these ingredients together and if the patient be an adult or full grown, take one common teaspoonful a day, and so in proportion to a child according to its age. In one-hour after, take the filings of the one-half of a copper of the above kind, in a small quantity of water.

The next morning fasting (or before eating) repeat the same as before. This, if complied with after the biting of the dog and before symptoms of madness, will effectually prevent any appearance of the disorder; but if after the symptoms shall appear, a physician must immediately be applied to, to administer the following, viz: Three drachms of verdigrise, of the kind before mentioned, mixed with half an ounce of calomel, to be taken at one dose. This quantity the physician need not fear to administer, as the reaction of the venom then diffused through the whole system of the patient, neutralizes considerably the powerful quality of the medicine—and

Secondly, if in four hours thereafter the patient is not completely relieved, administer four grains of pure opium, or one hundred and twenty drops of liquid laudanum.

N. B.—The patient must be careful to avoid the use of milk for several days after taking any of the aforegoing medicine.

JOHN M. CROUS.

Albany *ss.*

John M. Crous being duly sworn deposeth, that the above account and prescription for the remedy and cure of the hydrophobia or canine madness, is a just and true account and prescription, and the only one used and practiced by himself for more than twenty years past, and which has never failed of perfect success in any instance of the vast number of unfortunate beings who have been bitten by the mad dog, and who have applied to him, the deponent, for relief.

JOHN M. CROUS.

Sworn the 24th day of March,
1806, before me, James Kent,
Chief Justice, &c.

While the above has the flavor of mediaeval superstition, one cannot but wish that the average legislator of to-day, was as ready to recognize and further the rapid advance made in scientific medicine, as were our forefathers the crude attempts of a century ago.

Respectfully,

WILLIAM H. SHIPPS.

Bordentown, N. J.
June 16, '94.

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SATURDAY, JULY 7, 1894.

EDITORIAL.

BERI BERI.

The occurrence of beriberi or endemic poly-neuritis at the port of Philadelphia last winter, proves that even so rare adisease as this occasionally falls under our observation, and, with the increased and closer communications between the United States and Japan, China and India, together with the great reduction in time that has been brought about by the increase of speed in the steamships, makes it probable that, in the future, a larger number of cases may be imported. It is more than probable that, under the name of beriberi, a number of conditions are included, each of which is characterized by the symptom of poly-neuritis. Many cases develop from the exclusive use of rice, and it is not improbable that, under these circumstances, the rice is spoiled; in the spoiling a fungus has developed which, when taken, produces the symptoms of this disease. Pellagra, a disease not uncommon in certain portions of Italy, and caused by spoiled corn, produces very marked neuritic symptoms. Reasoning by analogy, one may expect that a similar change in rice would be able to produce analogous changes in the nervous system. It is very certain that a number of the cases presenting the clinical picture of endemic poly-neuritis are produced by decomposing fish, cases of which have been reported by authors in this and other countries. In at least three of the cases that occurred at the Lazaretto this causation was unmistakable, the men having existed chiefly upon fish, much of which was decomposed, for the greater part of the voyage, which lasted 80 days. Muscarin and other chemical poisons are able to produce well-marked inflammatory changes in the nervous system, and one may readily understand how decomposing fish could produce multiple neuritis.

As Scheube has so well stated in his aecent admirable monograph on this disrese, beriberi is not contagious, at least in the sense that measles is communicated from the sick to the well, but is more like malaria in its transportability. Numerous bacteriological studies of beriberi have been made during the past 15 years, but the

results are contradictory and unsatisfactory, so that, in our present state of knowledge, we are compelled to admit that no definite organism has been proven to be the cause of this disease.

The diagnosis is easy when the possibility of the occurrence of this disease is taken into consideration, and where it does not occur in the so-called rudimentary forms, where the symptoms are all poorly developed. The well-known atrophic and dropsical forms are easily recognized.

The mortality from this disease is low, and varies in different epidemics from 5 to 15 per cent.

The treatment is purely symptomatic in view of our ignorance as to the essential cause of beriberi. The treatment of the neuritis is the same as for that from other causes; the cardiac phenomena and dilatation is best overcome by rest in bed and the use of full doses of digitalis, to which may be added strychnia. Good hygienic and climatic surroundings are particularly beneficial, and should be secured to the patient when possible.

SUPERSTITION IN NEW YORK.

In the *New York World*, June 20th, we find the following advertisement:

"CAUL FOR SALE, reasonable. Address ———, box ——, World, uptown."

It is more than two centuries since Sir Thomas Browne wrote—"Great conceits are raised of the involution or membranous covering, commonly called the silly-how, that sometimes is found about the heads of children upon their birth, and is therefore preserved with great care, not only as medical in diseases, but effectual in success, concerning the infant and others, which is surely no more than a continued superstition. For hereof we read in the Life of Antoninus, delivered by Spartianus, that children are born sometimes with this natural cap; which midwives were wont to sell to credulous lawyers, who had an opinion it advantaged their promotion." In a foot note the editor states that "even till recently the opinion has been held, that a child's caul would preserve a person from drowning. In the *Times* of May 6, 1814, were three advertisements of fine cauls to be sold at considerable prices specified."

That this superstition still lives in New York City is certainly remarkable. We wonder if the purchasers of cauls are lawyers who desire to be eloquent, or persons exposed to the perils of ocean travel. It will cost less to buy a caul than to go to Ireland and kiss the Blarney Stone, an osculation which few but fools would attempt, when the difficulty and danger of the effort appear; it would cost less too, than the ordinary life preserver, and might dispense with life boats. How profitable the sale of cauls might be made by maternities. Here is a branch of infant industry which needs no protection, and who knows how vastly it may extend, if the advertisement we have quoted can be taken as a sign of the times, or even as one of the ways of the world!

Chronic Diarrhœa.

℞

Pulv. ipecacuanhae	gr. x
Pulv. populos trem	ʒi
Pulv. capsici	ʒiss
Pulv. xanthoxylum	ʒi
Pulv. myrica cerif.	ʒi

Mix and make into four-grain pills.

Dr. W. C. Buckley in Southern Med. Record.

Chronic Cystitis.

℞

Tr. collinsoniae	ʒvi
Copaibae	ʒiij
Liq. morphinae	ʒss
Liq. potassae	ʒss
Ol. menth. pip.	m.iij
Aq. camphorae q. s. ad	ʒvi

M. Sig.—A tablespoonful to be taken every four hours.

—*Dr. Chevers in Medical Press and Circular.*

ABSTRACTS.

DYSMENORRHŒA.

Dr. Howard Kelly, of Baltimore, maintains with cogent reasons and no uncertain voice the proposition that dysmenorrhœa is not a disease *per se* and of striking importance, that it *is* a symptom only of an inflammatory product or new growth in the pelvis and *outside* the uterus. It is necessarily implied in his argument, though Dr. Kelly does not state it explicitly, that the causes of dysmenorrhœa operate by an interference with the normal circulation of blood in the pelvic vessels. For only in this way could extra-uterine inflammation and small fibromata cause pain with the menstrual flux. Another notable fact is that Dr. Kelly makes no mention of the still popular myth "obstructive dysmenorrhœa," which is defined by its advocates as a painful flux induced *directly* by flexions of the uterus which, by narrowing the canal just above the cervical junction, interfere with the free escape of the menstrual blood. Nor does he give any intra-uterine conditions as *causes* of this symptom; even the reigning fad "endometritis" is not referred to as a causal factor.

We have always believed that both dysmenorrhœa and endometritis were symptoms of some form of extra-uterine inflammation, whether in the neighborhood of the uterus or other pelvic organ, which by its presence interferes with the normal function of the afferent and efferent vessels supplying the organ involved. The periodic character of the pain is easily appreciated if we consider that at the time of menstruation the pelvic blood vessels are many times increased in size and an inflammatory swelling of any character in the pelvis, which during the intermenstrual period might interfere little with the pelvic circulation, would in the dilated state of these vessels prove a most serious obstruction to the necessary flux. Especially is this true of inflammatory thickening of the connective tissue which furnishes support to the blood-vessels in the anterior and broad ligaments of the uterus. Between the reduplication of peritoneum which forms these ligaments pass many of the largest vessels in the pelvis, supported and surrounded, as are blood-vessels in all parts of the body, by trabeculæ of connective tissue. As this tissue in these ligaments is necessarily of small amount, a slight increase of its cells, as in congestion or inflammation, must prove a serious obstruction to the function of its enfolded vessels when these are dilated. The effect of new growths as a factor in obstruction will to a great extent depend upon their situation.

The *raison d'etre* of our belief that this is the rational explanation of dysmenorrhœa is the same cogent one adduced by Dr. Kelly. We have never seen a case of this symptom in which the evidences of extra-uterine inflammation or the presence of a new growth was not clearly marked, and we have never failed absolutely to cure the dysmenorrhœa when we have applied our treatment directly to the offending part—whether peritoneal or cellular inflammation, diseased tube or ovary, new growths or inflammatory adhesions. As to so-called "obstructive dysmenorrhœa," it fails to appeal to our reason that a flexed uterus through whose canal a large-sized sound can be immediately and easily passed (as may frequently be done in these cases) can be the direct cause, *per se*, of obstruction to the outflow of blood.

We believe, further, that when the profession at large comes to recognize flexures of all kinds occuring in a normally developed uterus as a symptom merely which indicates the presence of an obstruction, somewhere in the pelvis, to the normal flow of blood to and from the uterus, many a puzzling case will receive its happy solution.—*New York Journal of Gynecology and Obstetrics.*

Scabies.

℞

Glycerin	ʒvi
Gum tragacanth	gr. lxxv
Flowers of sulphur	ʒiij
Subcarbonate of potassium	ʒi
Essence of mint	ʒss
Essence of lavender	ʒss
Essence of cinnamon	ʒss
Essence of cloves	ʒss

M.—*Prof. Fournier in La Tribune Medicale*

Neurasthenia.

℞

Zinci valerianat	gr. xx
Quin. valerianat	gr. xx
Ferri valerianat	gr. xx

Mix for 20 pills. Sig.—One three times daily.

IS MEMBRANEOUS CROUP DIPHTHERIA?

Notwithstanding the investigations which this question has provoked during the last decade, there is still quite a diversity of opinion concerning the identity of these two affections, and considerable time must elapse ere a positive answer may be given to the query which forms the title of this paper.

In the past few years the bacteriologist and microscopist have stepped prominently to the foreground, and to their indefatigable labors and their valuable investigations and experimentation are we indebted for the marvelously rapid strides forward which medical science has taken. Our ideas of the etiology of disease have radically changed, and in consequence of our increased knowledge in this direction our methods of preventing and treating disease have become much more effective.

Through these bacteriologic investigations the discussion has arisen concerning the identity of membranous croup and diphtheria, and although the investigations in this matter may be said to be yet in their infancy, they have proceeded sufficiently far to convince many of the workers that the two diseases are one and the same, viewed from an etiologic standpoint.

As I stated, however, these investigations have but recently been commenced, and in this controversy I fear that we have depended too largely upon the statements of our friends, the bacteriologists, and paid insufficient attention to those men who see disease at the bedside as well as in the laboratory. The opinions of intelligent men who are daily in contact with the clinical manifestations of disease are certainly of great importance.

In treating this subject, I shall commence with this consideration of the etiology of diphtheria, as it is generally accepted at the present time. Without burdening you with a discussion of the predisposing causes, with which you are all familiar, I will proceed at once to the exciting cause which is contagion.

The disease is now known as the Klebs-Loffler bacillus, which was first described by Klebs and afterwards more extensively studied by Loffler. The production of the false membrane is the primary or local result, while the secondary or constitutional symptoms are due to the absorption of the poison generated by the Klebs-Loffler bacillus.

In the examination of the diphtheritic membrane, however, it has not uncommonly occurred that the characteristic bacillus was absent, and only streptococci, staphylococci, and at times other cocci were present.

The streptococcus, staphylococcus, etc., were also found in those cases, wherein the Klebs-Loffler bacillus existed, and in these cases the attacks were almost invariably more severe than when these cocci were absent. This fact has been accounted for by the supposition that these cocci penetrated parts that the Kelbs-Loffler bacillus did not reach, it being confined entirely to the membrane.

Baginsky, in a paper recently read before the Berlin Medical Society gave the following statistics: Out of 154 cases of diphtheria he obtained cultures of the Kelbs-Loffler bacillus in 118 instances. In the remaining thirty-six cases the streptococcus and staphylococcus alone were found; of this latter class, thirty-two of the cases terminated in complete recovery, unhindered by any complications.

From these observations, Baginsky is strongly inclined to the opinion that there occur two separate and distinct forms of diphtheria; a true diphtheria having for its cause the Klebs-Loffler bacillus; and a pseudo-diphtheria, in which streptococci and other cocci are the etiologic factors. Dr. T. M. Prudden, of New York, publishes an account of his investigations, which comprises twenty-four cases. A vast majority of these cases occurred as a complication or sequel to scarlatina, and in none was he able to demonstrate the presence of the Klebs-Loffler bacillus. Martin publishes an account of the examination of 200 cases, in 79 of which the characteristic bacillus was absent, and in this latter class the mortality was very markedly lower than in those cases characterized by the presence of this bacillus.

Dr. Wm. H. Park, of New York, states that in 127 cases in which the Klebs-Loffler bacillus was found to be present, the mortality was 34.2 per cent. while in 79 cases in which it was absent,

the mortality was but 4.3 per cent. Park also says:*

"The inflammation caused by the streptococci and to a less extent by other cocci, differ greatly. They may be conveniently divided into :

1. Pseudo-membranous angina.
2. Pseudo-membranous laryngitis.
3. Croupous tonsillitis.
4. Follicular tonsillitis.
5. Acute pharyngitis and tonsillitis without exudate.
6. Cases similar to all the preceding, but complicating infectious diseases."

From the above facts I would glean the following points, the correctness of which is accepted by many.

1. That those cases which we have heretofore diagnosed as diphtheria are divided into two classes, one of which constitutes true diphtheria, the etiologic factor of which is the Klebs-Löffler bacillus, while the other class consists of cases of exudative tonsillitis or pharyngitis, caused by the presence of streptococci, staphylococci, etc.

2. That true diphtheria is a disease attended with a very high death rate, the severity of the affection being caused by the absorption of a toxalbumin, which is generated by the Klebs-Löffler bacillus, and which produces septicemia, paralysis, albuminuria, ganglionic engorgements, etc.

3. That uncomplicated exudative pharyngitis or tonsillitis (so-called pseudo-diphtheria) is followed in a vast majority of cases by complete recovery.

4. That only the true diphtheria is contagious.

I will next briefly consider the etiology of that affection known as membranous croup. The exciting causes of this affection were until recently supposed to be exposure to cold and moisture, and the infectious diseases, contagion having no etiologic importance.

It is now claimed by many writers of authority that the disease is produced by the Klebs-Loffler bacillus, and is in consequence diphtheria.

Frankel records four cases of idiopathic membranous laryngitis, in none of which was there any membrane found in the fauces either before or after death; but in all four of these cases pure cultures of the Klebs-Löffler bacillus were obtained; and he concludes as a result of his investigations that idiopathic membranous laryngitis and diphtheria are etiologically identical.

Other investigators whose opinions are also worthy of respect and consideration have arrived at practically the same conclusion.

It should be remembered, however, that the examinations of the membrane of croup have been comparatively few, and, although we have proof positive that many cases of croup are in reality true diphtheria, the investigations have not as yet proceeded sufficiently far to admit of the opinion that all cases are produced by the characteristic diphtheria bacillus, or to make such opinions of any great value.

If, however, this is the case, then membranous croup must of necessity be a highly contagious disease, and right here is the stumbling block in the pathway of the advocates of this theory.

In studying the literature of the subject I have been unable to obtain any tangible evidence of the contagiousness of this affection. On the contrary, I find abundant testimony to the effect that the possibility of communication from one to another does not exist.

Osler, in his recent work on the "Practice of Medicine," states that he has twice observed cases of membranous croup in the Infants' Home in Baltimore were the conditions favorable to the spread of the disease existed, yet no other cases occurred. Other authorities agree with this opinion.

It has been my own misfortune to have had in my charge, at various times, four cases which I believed to be idiopathic membranous laryngitis, the last one occurring about one year ago.

At the time of my attendance upon these cases I gave little or no thought to the possibility of contagion, especially as there was no exudate visible on the fauces. Consequently no precautionary measures whatsoever were taken. The patients were not isolated, other children being allowed the freedom of the sick chamber.

In each of these cases there were other children in the family, of an age rendering them susceptible to contagion. In one other family there were four other children under the age of twelve years. Neighbor children were also allowed by

*Annual of the Universal Medical Sciences, 1893, Vol. 1.

the family in and out of the room and were frequently in close contact to patient. This occurred in two cases. In not one of these four families did there develop a case of diphtheria, neither was there an appearance of the disease in any of these neighborhoods. It seems to me that these cases would have formed excellent nuclei for an epidemic had the trouble been true diphtheria.

Such experiences have occurred, I have no doubt, to nearly every one within the sound of my voice. What would be the result if we were to handle a case of diphtheria in this fashion? We would undoubtedly have a nest of diphtheria to pay for our negligence. It may be said in answer to this, that in the majority of cases we have but one patient in the family, the disease not extending to other members. This is true, but the precaution every physician takes to prevent the spread of the disease is the reason for it. How many physicians five years ago took these same precautionary measures in membranous croup?

In further support of the view that many cases of membranous laryngitis are due to causes other than diphtheria, permit me to briefly present some statistical facts.** From 1775 to 1850, diphtheria was almost or quite unknown in this country and in Great Britain, but many cases of non-contagious membranous laryngitis occurred during this period.

In Philadelphia from 1846 to 1849 the annual mortality from croup was from 111 to 312. Do deaths from diphtheria are recorded during this period. From 1860 to 1879 the annual mortality from croup ranged from 185 to 455, while from diphtheiria it was from 110 to 708.

Previous to 1859, when diphtheria made its appearance in Philadelphia, there had occurred altogether 3,078 deaths from croup, during which period, no diphtheria was encountered so far as is known.

In New York City previous to 1858, but three deaths from diphtheria occurred during the present century, while croup had been more or less prevalent.

From 1858 to 1875 the annual death rate from croup ranged from 338 to 758, while that from diphtheria was from 5 to 2, 329. Dr. Lewis Smith, in this connection makes the following observation: "It is evident that most of the cases of croup occurring in New York prior to 1858 were due to other causes than diphtheria. It seems hardly probable that so many cases occurring in the hands of hundreds of skilled practitioners should have presented none of those symptoms which we now recognize as characteristic of diphtheria, especially septicemia. It is probably an acute, non-contagious, non-infectious inflammation of the larynx, local in character. But there is also a true diphtheria (laryngeal), and this is the more common form at the present time."

The two diseases present some differences in their clinical aspects. In diphtheria the initial symptoms are slight chilliness, fever, aching in back and limbs, etc. In croup the first symptoms are slight hoarseness accompanied by a rough cough, while there is little or no elevation of temperature.

In diphtheria, the temperature gradually rises, generally reaching 108 or higher, while in croup the temperature is ordinarily much lower than this and not infrequently it remains normal. In diphtheria the first indication of local trouble is slight redness of the fauces and more or less difficulty in deglutition. In croup we have in addition to the cough and hoarseness, which gradually increase in severity, dyspnea, which gradually becomes more and more intense.

In diphtheria, the exudate in the vast majority of cases makes its initial appearance upon the tonsils, later extending to the pillars of the faucus, the uvula and even to the posterior pharyngeal wall; later, in some cases extending into the posterior nares or downward into the larynx, trachea and bronchi. In croup, the membrane invariably first appears in the larynx, from this point extending upward or downward or both. In diphtheria, we generally have a characteristic grandular swelling, which is absent in croup. Constitutional symptoms are prominent in the former disease and absent in the latter. In croup, all the symptoms are rapidly increased in severity, the dyspnea becoming intense. Cyanosis soon appears, and death generally closes the scene.

Should the diphtheria be laryngeal in character, there would not be such a wide divergence in the smyptoms. Still the fever would be higher than in croup, glandular swelling would occur and the constitutional symptoms be marked.

** Reference Hand-book of Medical Sciences.

Two of the cases of croup in my own practice, to which I referred, had absolutely no rise of temperature at any time, and in all four of the cases no glandular swelling existed and no symptoms characteristic of diphtheria were present.

In the earlier portion of this paper we have seen that there occurs a true diphtheria, highly contagious and very fatal; and a so-called pseudo diphtheria not contagious and much less fatal than the former affection. We have seen that the etiology of these two diseases is very different.

Is it not possible, nay, even probable, that these same conditions prevail with reference to the laryngeal mucous membrane? I would answer the question affirmatively, and would further strengthen this opinion by studying the history of diphtheria and croup as they occurred in this country during the present century, and to a certain extent by the study of the clinical manifestations of the two affections.

The conclusions, then, which I have reached are as follows:

1. That there are two forms of membranous laryngitis; one a true diphtheria, produced by the Klebs-Loffler bacillus and the other non-contagious membranous laryngitis, produced, if you please, by streptococci, staphylococci, etc.; and that both of these types are very fatal.

2. That membranous croup as we have heretofore understood it, is a disease of much less frequency than was formerly supposed.

3. That it being impracticable to make a bacteriologic examination of the membrane in many cases, and as this is the only method by which we may be absolutely positive of our diagnosis, the same precautionary measures should be taken to prevent a possible spread of the disease as would be adopted in a case known to be diphtheria.

Those who believe that a non-contagious membranous croup does not exist will hardly be favorably impressed with the idea of carding the house, isolating the child, and causing any other children who may be members of the family, to remain from school several weeks, but in the light of our present knowledge upon the subject it is the only safe method to pursue, unless a careful microscopic examination by a competent bacteriologist has demonstrated the absence of the Klebs-Loffler bacillus.—*F. C. Woodburn in Jour. Am. Med. Ass'c.*

THE ABSORPTION OF IRON.

The importance of iron in the nutrition of the animal body has long been recognized, but there has been many and varied speculations as to the way in which the iron is utilized by the system. Obviously, the bulk of the iron actually absorbed eventually enters into the hæmoglobin of the red blood corpuscles, and that, no doubt, represents one of the chief functions of this element. Still, it is to be remembered that when iron enters into an organic compound it cannot always be detected by the ordinary reactions, and hence we have to admit the possibility of its wide-spread distribution through tissues and organs hitherto considered free from this element. Indeed, Macallum has shown by the use of micro-chemical methods that the most important of all elements in the life of every cell is an iron-containing compound; even the prozymogens, if not the zymogens themselves, found in the various secreting glands, contain some iron, so that it is quite possible that iron is essential for the life and well-being of every tissue cell.

To a person interested in nutrition, the question naturally arises how, and in what forms, is iron absorbed? Can the iron needed for the wants of the body be supplied by organic iron salts, or must it be introduced in the form of organic iron compounds? Further, assuming that the inorganic compounds are available for the needs of the organism, are they directly available or must they first be converted through synthetical processes into complex organic compounds before they can serve their full purpose as nutrients? These questions have been variously answered by different observers, so that at the present time our knowledge of this matter is in a somewhat uncertain condition.

In an article just published by Dr. Macallum, of the University of Toronto,* we

* On the Absorption of Iron in the Animal Body. *Journal of Physiology*, Vol. xvi., p. 268.

find recorded many interesting results bearing upon these questions; results well worthy of consideration, for they were obtained by carefully conducted feeding experiments followed by micro-chemical examination of the various tissues and organs. Experiments made with guinea-pigs, for example, show that when inorganic iron compounds are fed a certain amount of the iron is absorbed in the intestinal mucosa. Further, it was noted that the accumulation of iron in the mucosa, when the dosage was small, was limited to the sub-epithelial portions of the tips of the villi, the iron being deposited in leucocytes which in their disposition form a sort of cap for the extreme end of the lacteal vessel. That the iron in these leucocyte cells originates from the food was plainly apparent from the fact that the tips of the villi gave only a feeble reaction for iron when the animal was deprived of food for some days. In well-fed animals, on a normal diet, the iron reaction is most marked in that portion of the intestine closely adjacent to the pylorus; even ten inches away from the pyloric orifice the iron reaction may be entirely negative. When, however, inorganic iron compounds are fed, the area of absorption and the extent of the deposition of the iron are determined mainly by the nature and quantity of the compound given. Thus, when the amount of iron fed is large, the absorptive area may embrace the whole length of the small intestine, and the iron may be found not only in the underlying elements, where it seems to be specially transferred by the epithelial cells, but also in the epithelial cells themselves. This is explained by Dr. Macallum as follows: "The iron salt of the chyme, when the latter is thoroughly mixed with the biliary and pancreatic fluids, becomes wholly precipitated if the alkalinity of the two latter fluids is sufficiently great. The alkali present may be completely destroyed by a large quantity of iron salt in solution, and when this occurs the excess of the iron salt not precipitated and remaining in solution is absorbed. When the quantity in excess of that necessary to destroy the alkalinity is very great, all the villi of the intestine are in a position to absorb some of it. If, on the other hand, the dose is small, absorption in the upper end of the intestine is favored by the circumstance that the three fluids, chyme, bile and pancreatic juice, do not immediately and intimately mingle and, thefore, the iron is not at once precipitated, some of it being absorbed before that occurs. The quantity of acid in the chyme is a factor of some importance, and when the iron given is in the salt form and not as the oxide, the acidity of the chyme is not decreased, the acid of the salt displaced taking the place of the hydrochloric acid. When the oxide or the reduced metal is administered, their solution takes up a portion or all of the acid without contributing in turn to the acidity of the chyme, and, therefore, in the intestine the alkalinity of the bile and pancreatic juice goes further in the precipitation of the salts of iron in solution in the out-poured chyme. The larger the amount of free acid in the latter, the greater must be the quantity of iron absorbed."

When the amount of absorbed iron contained in the epithelial cell is small, that part of it in the lower end is dissolved in the protoplasm, but when the amount is large it appears to be precipitated in a granular form. The dissolved form of the iron compound is considered to be an albuminate, but the character of the granular form is less certain and it is equally difficult to determine the exact nature of the granular masses in the leucocytes below, although they are assumed to be of albuminative composition.

While the leucocytes plainly transfer the absorbed iron into the general circulation, it is probable that by far the greater portion of the absorbed iron, especially when the dosage is large, is carried from the villus by means of the blood-plasma and is then made use of as the requirements of the organism demand. In the words of Dr. Macallum, "It follows from the results of these experiments that inorganic and albuminate compounds of iron are absorbed, at least in the portions of the intestine near the pylorus, and in all parts of the small intestine where the iron compound is not precipitable on mixture with the bile and the pancreatic juice. Undoubtedly, also, sulphides in the bowel must remove from solution a quantity of iron in proportion to their abundance. In ordinary diet the extent of the mucosa which absorbs iron must be, in proportion to that which does not, remarkably small. It may possibly be that in the human subject when the iron is specially increased, the extent of the absorbing surface is increased, the more so when there is a di-

minution in the amount of pancreatic and biliary fluids, a condition possibly in anæmias. The view held by some that iron salts are not absorbed and that these exercise their effect by stimulating the mucosa to greater physiological activity, is opposed by the results of these experiments. If iron salts stimulate, it is because they penetrate the epithelium of the mucosa and in so doing are transferred to the underlying elements. In other words, they are absorbed. But the extent of the absorbing area is limited; so likewise must be the extent of the area supposedly stimulated and, therefore, the beneficial effects of the stimulation of the mucosa alone must be small. What, then, is the purpose served by the absorption of iron salts? Leaving out of consideration the possible answer that the iron of such combinations becomes assimilated; that is, is united in the animal cell with other constituents to form what the histologist calls chromatin, we may discuss some explanations of its effects. The experiments with the feeding of 'peptonate' and of albuminate of iron are, of course, too few to enable one to infer anything concerning the action of iron-holding proteids of this character, but all the experiments without exception indicate that the leucocytes have a special affinity for inorganic and albuminate compounds of iron, and it is not too much to infer that this affinity involves a stimulating or chemiotactic effect upon the leucocytes, and that iron salts exercise an effect on other cells corresponding to their function.

The number of leucocytes which are engaged at any one time in the absorption of iron is comparatively small, owing to the small extent of the intestinal mucosa bathed by a solution of an iron salt, and, therefore, the stimulating effect would appear to be small, but it must be remembered that, with the constant stream of iron-holding plasma and iron-holding leucocytes from the villi in the upper portion of the small intestine to the liver, spleen, etc., the other cells of the body, including leucocytes with little or no inorganic iron, are put in position to obtain some of that absorbed. There is also another way in which the question may be viewed. Inorganic compounds of iron, like those of calcium, potassium and sodium, have been since the dawn of animal life on the globe, constituents of its media and of its food, and it is possible that the animal cell has, in acquiring a tolerance for them, accommodated its functions to their presence and has established with them a physiological equilibrium which it may be impossible to maintain in the absence of such compounds. The view that the iron of inorganic combinations goes directly into combination with nuclein and albumin to form chromatins, is one that may in the future be proved correct, but whether it will happen so or not, it is not now, nor apparently will it be then, incompatible with the explanation of other possible functions of iron salts like those just referred to."

Dr. Macallum's researches also show that when iron is absorbed in excess of the needs of the body it is excreted through different channels in different animals, dependent, apparently, upon the degree of activity which the organs present in different animals. In man, the liver and kidneys are most active in the excretion of iron.

In studying the absorption of organic iron compounds, Dr. Macallum employed representatives of the so-called assimilated compounds of iron, such as the nuclein bodies, commonly known as the chromations. After some successful feeding experiments with chromatin isolated by artificial gastric digestion, recourse was had to unboiled egg-yolk, which, according to Miescher, contains 1 to 1.5 per cent. of nuclein (hæmatogen.) This chromatin appears to exist in the egg-yolk partly in the form of granules and partly as a membrane to the contained fat globules, the latter being quite small and "shading off into the small granules in such a way as to suggest that the latter are also fat globules of almost infinitesimal size surrounded by chromatin." This material evidently undergoes absorption in the intestine of the guinea-pig, and when fed for some days upon the above food the cytoplasm of the liver cells yields marked evidence of the presence of an organic iron compound belonging to the "chromatin" class and derived from the yolk fed. As to the way in which the chromatin is observed no definite statement can be made, but apparently the process is connected with the absorption of the fat with which the iron compound is closely associated in the yolk. Evidently, then, both simple iron salts and organic iron compounds can be absorbed and utilized by the animal organism. There are still, however, many questions to be answered relative to the way in which the iron serves its purpose in the economy.

VACCINATION AND REVACCINATION.

The periodic recurrence of more or less extensive epidemics of small-pox in various countries, even in those where vaccination is popularly believed to be very generally employed as a prophylactic, justifies also the periodic repetation in the medical and lay press of some of the very instructive and conclusive facts furnished by vaccination which it seems to us should set at rest forever any doubt or skepticism concerning the protective value of vaccination—were it not that these incredulities seem also to follow some law of periodicity as to their development and dissemination.

The experience we have recently had with small-pox in the United States, and the blatant illogical opposition to the practice of vaccination as not only possibly injurious but probably, also useless—which we occasionally hear voiced in diverse publications, (happily. usually foreign)—suggest to us the advantage of printing for the benefit of our readers an extract from a most carefully prepared comparative analysis of the results of vaccination and revaccination, by Dr. Goldschmidt of Strasburg, 1890.

It is, however, as a strong argument in favor of obligatory vaccination and *revaccination* that we would commend this abstract to the attention especially of those of our readers who interest themselves in shaping and aiding the enactment of legislation for the benefit of the public health.

The memoir in question contains (*Rev. de Méd.*, 1890, pp. 315-351) a large number of statistical documents upon the subject, among which are some most striking. From them it is shown that the city of Paris alone has more deaths from small-pox annually than has the whole German Empire.

Germany is the sole country where compulsory vaccination and *revaccination* has been practiced since 1875, a glance at the following table shows the striking result of this practice as a means of effectually exterminating small-pox.

ANNUAL AVERAGE OF DEATHS FROM SMALL-POX AMONG 100,000 INHABITANTS.

Prussia, 1860-69, before the compulsory law	33.84
Prussia, 1875-84, after vaccination and revaccination (compulsory)	2.23
Berlin, 1875-84, " "	1.68
Dresden, " " "	1.48
Breslau, " " "	1.61
Bavaria, " " "	1.11
Paris, 1875-84, vaccination voluntary.....	28.95
Paris, 1887, " "	17.20
Vienna, 1875-82, " "	84.37
Austria, 1875-84, " "	61.64
England, 1875-84, one vaccination obligatory	7.61
London, 1875-84, " "	25.50
London, 1887, " "	0.20

In 1886, in all Germany there died of small-pox 193 inhabitants, that is to say 0.4 per 100,000, a smaller number than that furnished by the city of Paris where there were during that year 218 deaths from the same disease; again, for the year 1887 the numbers were respectively 168 and 389. At Marseilles in 1886 there were 2,051 deaths from small-pox, a proportion of 545.3 per 100,000; it is true, however, that during the following year there were only 63 deaths; from the same disease or 16.7 per 100,000. But during this time there was only one death by the same cause at Berlin (0.07) and none at Dresden, Cologne, Breslau and Frankfort.

In the Prussian army 300,000 strong, from 1886-84 there was not a single death from small-pox, and there was only one in 1885 notwithstanding a total of 135 cases of the disease in ten years.

In the French army which counted an average of 460,000 souls, from 1876-85 there was an average of 627 cases and 54 deaths of small-pox per year, that is 12 deaths per 100,000 men. But in this period of ten years, with the extension of the practice of revaccinations, the number of deaths had been constantly decreasing, from 227 in 1879 to 6 (with 214 cases) in 1886; with the result that for the last two years the proportion was only one death per 100,000 men. It should not be surprising that, in the midst of the civil population of France which still suffers so much from small-pox, the French army furnished a larger number of cases and deaths of small-pox than does the German which is almost free from exposure to this contagion from the population which surrounds it. There exists in France no statistics which show the exact number of deaths from small-pox among the total population of the country.

Although the German law of April 8, 1874, makes vaccination and revaccination compulsory, as a matter of fact, 10.51 per cent. of the whole number of young child-

ren available for a primary vaccination and 3.5 per cent. of all the children of 12 years available for revaccination escape both of these protective operations. Variola may therefore still exert its malignant influence even in Germany upon a number of subjects—collectively large—upon whom vaccination has not conferred or has not restored immunity. Thus, in 1886 and 1887, infants from one to three years of age furnished nearly half the deaths from small-pox in Germany. In the latter country the practice of vaccination from arm to arm (with the so-called human virus) has greatly and constantly diminished since the compulsory law was enacted. For example, in 1879 the animal virus was used for only 2.50 per cent. of the children vaccinated; while in 1885 it was used in 33.10 per cent. of such operations. (Later statistics show a still more marked decrease in the use of human virus.) The objection raised in some quarters, especially, in some of the densely ignorant manufacturing districts of England, to the possibility through carelessness of the inoculation of loathsome constitutional diseases with the human virus certainly cannot have even any fancied weight when animal virus is used.

In Alsace-Lorraine the proportion of successful primary vaccinations has been 95 per cent.; for the *revaccinations*, it was 75.3 per cent. in 1885, 71.4 per cent. in 1886 and 79.6 per cent. in 1887. At Strasburg upwards of 8,000 children of 12 years of age *revaccinated* either from arm to arm with the human virus or directly with the animal virus, Dr. Goldschmidt obtained a proportion of success which varied from 79.80 to 75.59 per cent. This is large and is above that which has been usually obtained in France, but it is scarcely equal to that obtained by the revaccinations in Germany. It is true that the revaccinations take place at 12 years of age in Germany, while the figures in the French army (about 60 per cent.) concern young men from 20 to 21 years of whom doubtless a certain number have been already vaccinated before entering the service.

Dr. Weil, Cantonal physician in Hagnenan, cited by Goldschmidt, for 2,111 subjects revaccinated obtained a porportion of success which increased with the age of the subjects as indicated by the following table:—

Revaccinated.	*Percentage of success.*
From 6 to 7 years old	32.60
" 7 to 8 " "	64.00
" 8 to 9 " "	72.52
" 9 to 10 " "	79.63
" 10 to 11 " "	85.94
" 11 to 12 " "	88 64
Adults	90.00

The greater number of the 368 adults revaccinated had been vaccinated only in their early infancy and had certainly not been revaccinated previous to the operation in question.

These facts, and others like them which are accumulating constantly, prove the absolute necessity of revaccination, since they show that in 85 to 90 times in the 100 the immunity against small-pox conferred by the first vaccination has disappeared in twenty years; they also demonstrate in a most striking manner how certain a measure of public defense against the spread of small-pox is *conpulsory* and *revaccination. — Dietetic and Hygienic Gazette.*

Catarrhal Jaundice.

℞
Sodii phosphat..... ʒiss
Sodii salicylat..... ʒij
Aquae distillat., q. s..... ʒvij

M. Sig.—Tablespoonful in one-half glass of water after each meal.

Sugar as a Food.

Some recent results published by Dr. V. Harley, in the proceedings of the Royal Society of Great Britain, bearing on the influence of sugar as a food in the production of muscular work are full of interest. "The conclusions of his experiments, which were performed on himself with Mosso's eigograph are as follows: (1) Sugar when taken alone is a muscle food; 500 grams (7½ ounces) of sugar increased the amount of muscular work done on a fasting day, from 61 to 76 per cent. (2) The muscle energy-producing effect of sugar is so great that 200 grams (7 ounces) added to a small meal increased the total amount of work done from 6 to 30 per cent. (3) That when sugar was added to a large meal it increased the total amount of work done from 8 to 16 per cent. (4) That the work done during a period of eight hours can be increased from 22 to 36 per cent. by taking 250 grams (8¾ ounces) of sugar. (5) That when sugar is taken at 3.50 p. m., it not only obliterates the diurnal fall in the muscular power, which usually occurs at 5.30 p. m., but even causes an actual increase in the total amount of work done."—*Dietetic and Hygienic Gazette.*

Night-Sweats of Phthisis.

M. Alb. Robin (*La Medecine Moderne*) prescribes:

℞
Pulv. agarici..... gr. vij
Zinc. oxid ..... gr. iss
Pulv. camphor..... gr. ⅛

M. Sig.: For one cachet. To be taken on going to bed.

CURRENT LITERATURE REVIEWED.

IN CHARGE OF ELLISTON J. MORRIS, M. D., AND SAMUEL M. WILSON, M. D.

THE VIRGINIA MEDICAL MONTHLY

For June contains a paper on

The Radical Cure of Aural Polypi.

by Dr. T. T. Churchman. The author states that after the ordinary methods have been tried faithfully without success, he advises the removal of the drum with one or more of the ossicles. In this way, by the removal of the polypus, drum, and one or more of the ossicles, the discharge will be cured and the recurrence of the polypus thereby prevented. In these cases where free drainage can be established, the author does not attempt to destroy the pedicle, for by the use of the proper antiseptic washes the exciting cause will be removed and the pedicle will atrophy and disappear.

Dr. Q. C. Smith contributes an article on

Placenta Prævia; How to Treat it.

If the cervix is relaxed so that the finger can be passed through it, the author advises that the finger be passed through the placenta and the waters evacuated, firm, steady, continued pressure being made over the fundus till other hæmostatic measures can be brought to bear. If the cervix is so small and rigid that the finger cannot pass through it then the author advises that the cervix be douched with what he terms "hop styptic water" (hot solution of alum) until the hemorrhage is partially or entirely staunched. The patient is then to be placed in the Sims' position, a speculum introduced and the hot styptic water injected through the cervix until all the hemorrhage ceases. The bladder is then emptied by means of a catheter and three to five grains of muriate of quinine and urea administered hypodermically and hot whiskey todies given till the patient is well under the narcotic and anæsthetic effect of the whiskey. If the cervix is still very rigid, a drachm of fluid extract of ipecac is to be given, as the author believes that large doses of ipecac are far more hæmostic and equalizing of nervous force than are small ones.

The cervix is now to be dilated using all the time the hot styptic water, and the placenta separated by means of a properly curved Simpson sound. The cervix is to be farther dilated by means of Barnes' rubber dilator. As soon as the cervix is sufficiently dilated and labor pains have come on with regularity the bags are removed, the placenta punctured with the finger and the presentation of the child discovered if possible. The child can then be delivered by the feet or by forceps as seems necessary.

Dr. J. Wesley Bovee discusses

The Conservative Treatment of Cancer of the Uterus.

The author urges the importance of a total hysterectomy so soon as the disease is discovered. He has little faith in the treatment by aniline preparations, at present in vogue in Europe, though it seems to retard the progress of the growth and render it less painful, and is therefore applicable to cases advanced beyond surgical aid. No remedy has yet been found that can compare at all favorably with surgical treatment, either as a radical operation for cure or for the removal of as much as possible of the diseased structures. We may reasonably hope for cure of cancer in the uterus if early extirpation be resorted to, but in the incurable condition our objects are to make the sufferer as comfortable as we can, and to prolong her life as much as possible.

Dr. M. W. O'Brien contributes an article on the

Treatment of Crushes of the Hands and Feet.

The author does not think that a hand crushed in the bumpers of a railroad car can be make surgically clean by any immediate washing or soaking in even the best hot antiseptic washes, so that a dry dressing can be put on as usually described and all go well. He has tried it many times, he states, and has had pus and fever and chill, so that the dressing had to come off and another course inaugurated.

The hot sublimate water dressing in crushes about the extremities is the ideal dressing, and has saved many hands and feet that, with any other line of treatment, would have come off at the point of selection.

In dressing a hand or foot in this way' first thoroughly wash and steam it with hot sublimate water (1 to 2,000); then, if any part is to be removed, trim it off and envelop the whole injured member in plenty of absorbent cotton, holding it in place by wrapping it with ordinary sewing cotton; put the part at rest comfortably on a sheet of rubber to carry the solution into a convenient receptacle, and assiduously soak it, at regular intervals, with 1 to 4000 sublimate water as hot as can be borne. By this means fever disappears, the circulation is coaxed into damaged tissues, granulations spring up, and the part is restored—this, too, without changing the line of local treatment except in degree.

There is one other fact in his experience in these injuries he thinks worthy of note. He has seen only one case of tetanus result out of a total of several hundred cases in the last ten years. This looks as though tetanus was exceedingly rare among injured railway men, though he does not see why it should be when all things are considered in connection with these cases.

Dr. George M. Kober continues his article entitled

A Study of the Soil in Relation to Health and Disease

Examination of the Soil.—A complete sanitary investigation should include the following points, viz:

(1) The configuration of the locality, height above the sea level, angle of declivity, facilities for natural drainage, water-sheds and courses, covering of soil by trees, brushwood, and grasses.

(2) Geological formation, dip and character of strata, especially in reference to their permeability.

(3) Examination into the size of the fragments or grains composing the soil is readily conducted by means of graduated sieves and a low power of the microscope.

(4) The porosity of the soil is usually determined by taking a liter of kiln-dried soil and ascertain how much water is taken up. The water must be added until air-bubbles cease to form. This is a simple, but not the most exact method.

(5) The *moisture* of the soil is determined by weighing a certain quantity; it is then exposed to a temperature of 220 until dry, and weighed again; the difference is water or some other volatile substance.

(6) The *capacity of the soil for holding water* is ascertained by thoroughly wetting a certain quantity previously weighed, drain off the water, and weigh again. This is not a precise method.

(7) *Measurement of the Ground-Water.*—The height of the water-level in wells is the best indication of the height of the ground-water. Pettenkoffer uses a rod for shallow wells and a cord for deep wells, to which are attached a number of little cups, which are let down into the well and drawn up again; the uppermost cup containing water, marks, of course, the height of the water, the length of this measure being known, the changing level of the well can be estimated to within one-half inch. Some precautions are necessary; for if a rope is used, it may stretch after prolonged use or during a hot wind, or shrink in wet weather, and thereby render the observations inaccurate, but not sufficiently so for practical purposes. It is best to use a rod in shallow wells, and the measurement should be made at a time when the supply has not been lowered by unusual consumption.

(8) *The ground air* is examined by sinking a shaft about sixteen feet deep, into which are placed lead pipes in 1½ feet, three feet, seven feet, nine feet, and fifteen feet lengths, and one-half inch in diameter. The soil is put back as nearly as possible into the original levels. The lead pipes are connected with an aspirator by means of rubber-tubing, and the aspirated air is examined for the determination of oxygen, carbonic acid, ammonia, hydrogen sulphide, and organic matter. The movements of the ground-air are determined by differential manometers.

(9) *Soil-pollution* is determined by a chemical analysis for the estimation of nitrogen and carbon. A simple way to ascertain the percentage of volatile matter is to take ten grammes of dried pulverized soil, incinerate at a red heat, recarbonate with carbonic acid solution or ammonia carbonate; heat again to expel excess of ammonia and weigh. The loss represents the amount of organic matter. The permanganate process is also applicable.

(10) The *micro-organisms* of the soil are best determined by using a borer invented by Frankel, and constructed on the principle of a butter-tester. This borer must be sterilized, and can be inserted to any desired depth. Upon withdrawal of the instrument, Frankel measures off, by means of a sterilized platinum spoon, a given quantity of the soil, and places it in a nutrient gelatine-culture tube, and shakes the mixture well. A small quantity of this is placed on glass plates under a damp glass air-chamber; and after the formation of the colonies, they are counted and isolated in the usual manner. The platinum measures hold about two grains of soil, as a larger amount would render the culture experiment very difficult and confusing because of the number of micro-organisms present.

(11) *The temperature of the soil* can be readily determined at any desired depth by placing a self-registering thermometer, properly protected, in a "drive well point joint."

Dr. Julius C. LeHardy in a paper entitled "Yellow Fever—Its Relations to Climate and to Hygienic Measures in the United States," after reviewing the various outbreaks of this disease, gives as his opinion that yellow fever acts, in every respect, like other epidemic diseases; its occurrence depends entirely upon the condition of the place. If cleaned and properly drained, the disease will not propagate whether in northern or southern latitudes, whatever may be the amount of rainfall, the heat of the sun, or the number of persons brought in with the disease.

The remaining papers in this issue are: "Auscultation of the Heart", by Dr. E. M. Macgruder; "Clinical Lecture on Hernia," by Dr. W. B. DeGarmo.

Under "Clinical Reports" is given a "Case of Dorso-Lumbar Spondylitis" illustrating the value of the jury mast, by Dr. Wm. J. Crittenden.

IN THE TEXAS SANITARIAN for May is a paper by Dr. F. C. Osborn entitled

Can Small-Pox be Aborted?

The paper is the history of a man vaccinated on the tenth day after exposure to small-pox and given one dose of calomel, and daily doses of hyposulphite of soda.

One week later the patient felt unwell, had headache, backache, nausea, temperature of 103°, and pulse of 92. A bath of warm water and soap was given, and a dose of calomel and ipecac.

In the evening the temperature was the same; but the face, neck, and chest were crimson, the lips swollen and sore, the tongue coated in the middle with white fur and intensely red at the edges, conjunctivæ injected, and the eyelids giving pain when moved. The bowels had opened.

The author thinks variola primarily a skin affection, and the constitutional disturbance secondary to it, and, expecting a variolous rash, he sponged his patient twice, once with a ten per cent. (sic) solution of bichloride, and allowed it to dry. Mouth, ears, nose

and eyes were washed with a solution of peroxide of hydrogen, and the great frothing following this showed its contact with pus or membranes full of bacteria, as otherwise it would be very scanty.

Seen the next morning the patient felt and looked well, had normal pulse and temperature and complained only of loss of sleep due to the prickling from the bichloride.

In this connection the author mentions curing a case of screw worms in the nose of a human being by injecting peroxide solution.

Other papers in this number are "The Nations Sin of Omission," by Dr. T. J. Bennett, an article on the necessity of a law restricting the practice of medicine by unqualified men. "The Conservation of Nervous Energy," by Prof. E. L. Blackshear. "Women and Sanitation," an editorial noting the increased interest shown in sanitation since the women of the country have taken steps to assist in perfecting it, and suggesting a radical change in the upholstery and general construction of sleeping cars.

IN THE JOURNAL OF CUTANEOUS AND GENITO-URINARY DISEASES

for June is an article by Dr. Eugene Fuller on

Chronic Seminal Vesiculitis.

The author states that, since the use of the electric endoscope is becoming more common, the so-called incurable urethral discharges are less frequently heard of, and yet we occasionally hear still of cases, which, after treatment for some time by well-known surgeons, were so obstinate that the patients gave up in despair, and finally, in some cases, seemed to cure themselves by venereal, or alcoholic excess, or a combination of these.

Success followed the treatment of many of these cases by stripping the seminal vesicles free from the pus which they usually contain, in this condition, by introducing the forefinger into the rectum. The method advocated differs essentially in object and procedure from the prostatic massage in use by some Russian authorities, and does not, as some suppose, require the possession of an unusually long forefinger. In fact the author thinks that a man possessed of even a short finger can by gentle persistence succeed in reaching and emptying the vesicles, if they are unhealthy. In cases where the patient is stout and muscular, the reinforcement of the surgeon's arm by his knee, as a rest, may be required at the first visit or two. When the vesiculæ are inflamed and the stripping is properly done, the pus and sometimes some blood, empties from the meatus. If, after this treatment has been used for a time, tenderness begins to increase, too much force has been used, and complete rest for a time is necessary. Typical cases are cited to show the symptoms to be expected and the results of treatment. The article will be continued later.

Dr. E. J. Stout reported a case of

Vanthoma Multiplex

The patient was a married seamstress of 50 years, who complained that one month after an attack of grippe, four years ago, she had a general jaundice. She has had rheumatism and, three years ago, syphilis.

The woman is five feet and one inch tall, is poorly nourished, and weighs one hundred and twenty-five pounds. She has headache, which has been much relieved by cutting the hair short. She feels drowsy during the day and falls asleep if not employed. Her general health is good, temperature normal, pulse sixty-four, appetite good, tongue badly coated, bowels regular, though the passages are diarrhœic and sometimes dark, sometimes clay colored. The patient is the color of a mulatto, and both conjunctivæ and mucous membranes of mouth are deeply jaundiced.

The rest of the body also is involved, but the legs and feet less than elsewhere.

Liver dullness, in the recumbent posture, begins in the sixth interspace, both anteriorly and posteriorly. In the normal position of the gall bladder is a very hard mass extending three quarters of an inch from the margins of the ribs.

There is no ascites. Examination of urine shows bile pigment, albumen, but no sugar; the specific gravity is (1010) and the reaction neutral. Nodular masses are felt on palpating the liver. The blood contains 4,640,000 red corpuscles per cu. cm. without increase of white conpuscles. Estimated hæmoglobin 60 per cent.

In February 1893, there appeared at the inner canthi of both eyes lesions of xanthoma palpebrarum, consisting of slightly elevated lemon yellow plates, about the size of a pea. The mucous membranes of the conjunctivæ and oval cavity, and the cornea are free from any similar growths. Along the natural furrows of the skin on the palmar surface of the hands, fingers, and the internal surface of the thumb are numerous similar lesions. The dorsal surface of the thumb and the knuckles of every finger are shedded with numerous similar lesions, varying in size from a millet seed to a large pea, and are velvety to touch.

On the dorsal surfaces the growths are lemon yellow, on the palms they vary from yellow to rose color. These growths do not coalesce and do not contain any liquid, but the patient complains of their itching and interference with work.

Below the right ear and along the angle of the jaw, and the inner border of the stennomostoid muscle similar growths vary in color from yellow to pink, and along the upper and interior borders of the scapulæ, along the arms near the axillæ, and along the extensor surfaces of the elbows these eruptions are arranged with considerable symmetry—resembling herpes to a great extent.

No history throwing any light on this disorder has been obtained from the patient, and no change, except that caused by excising a few lesions, has taken place while the patient has been under observation.

This disease, known under the following synonyms: Vanthelasma, vitiligoides, molloscum cholesterique, fibroma lipomatodes,

and defined by Virchow as a fibro-fatty neoplasm forming yellow plates or tubercles in the corium, has been regarded as an uncommon disorder, and the form most usually found is known as Xanthoma Palpebrarum and occurs as plates on the left upper eyelid, near the inner canthus.

When the disease takes an inflammatory form, fatty degeneration overtakes the leucocytes before they form tissue and they disappear as oil-drops, calcareous masses and cholesterine.

Hollopean thinks these benign neoplasms originate in embryonic generative fat cells, which persist and proliferate, and that the jaundice sometimes accompanying the trouble is due to the same cells in the bile ducts, and the glycosuria to their appearance in the pancreas. The etiology is still obscure however.

PERISCOPE.

IN CHARGE OF WM. E. PARKE, A.M., M. D.

MEDICINE.

Insomnia of Old Age.

Dr. J. W. Dale, in the *University —edical —agazine*, recommends very highly the use of morphia with a small amount of Dover's powder for the relief of the sleeplessness which is frequently one of the most serious complaints of the aged. The ordinary hypnotics, such as the bromides, chloral, and the numerous coal-tar derivatives, answer well for temporary purposes, but not where the demand is long continued. Dr. Dale gives at first from the 24th to the 12th of a grain of morphine, with two or three grains of the Dover's powder. This amount will need to be increased slightly as the patient becomes accustomed to it, but the doctor has found that even after a number of years, patients do not require an increase beyond a quarter of a grain of morphine and ten grains of the Dover's powder. Its use, he has found, is best limited to persons over 70 years of age, at which time of life its regular use is tolerated with impunity, and he has never found it to do any injury. The object in using the Dover's powder is to increase the bulk of the medicine, so that the patient will not be apt to increase the dose. Any particular increase would result in nausea from the presence of the ipecac. In addition to this, the small amount of ipecac present tends to maintain healthy action of the skin, and stimulate the stomach and the functional activity of the liver, as well as to diminish the tendency to constipation.

NEWS AND MISCELLANY.

DEER PARK

ON THE CREST OF THE ALLEGHENIES.

To those contemplating a trip to the mountains in search of health and pleasure, Deer Park on the crest of the Allegheny Mountains, 3,000 feet above the sea level, offers such varied attractions as a delightful atmosphere during both day and night, pure water, smooth, winding roads through the mountains and valleys, and the most picturesque scenery in the Allegheny range. The hotel is equipped with all adjuncts conducive to the entertainment, pleasure and comfort of its guests.

The surrounding grounds, as well as the hotel, are lighted with electricity. Six miles distant on the same mountain summit is Oakland, the twin resort of Deer Park, and equally as well eduipped for the entertainment and accommodations of its patrons. Both hotels are upon the main line of the Baltimore and Ohio Railroad, have the advantages of its splendid Vestibuled Limited Express trains between the East and West. Season excursion tickets, good for return passage until October 31st, will be placed on sale at greatly reduced rates at all principal ticket offices throughout the country. One way tickets reading from St Louis, Louisville, Cincinnati, Columbus, Chicago, and any point on the B. & O. system to Washington, Baltimore, Philadelphia or New York,or vice verse, are good to stop off at either Deer Park, Mountain Lake Park or Oakland, and the time limit will be extended by agents at either resort upon application, to cover the period of the holders visit.

The season at these popular resorts commences June 23d.

For full information as to hotel rates, rooms, etc., address George D. DeShields, Manager, Deer Park, or Oakland, Garrett County, Maryland.

SUMMER VACATION TOURS.

The Baltimore and Ohio R. R. Co. now has on sale at all its offices east of the Ohio River a full line of tourist excursion tickets to all the lake, mountain and seashore resorts in the Eastern and Northern States and in Canada. These tickets are valid for return journey until October 31st. Before deciding upon your summer outing it would be well to consult the B. & O. Book of "Routes and Rates for Summer Tours." All B. & O. Ticket Agents at principal points have them, and they will be sent post paid upon receipt of ten cents, by Chas. O. Scull, General Pass. Agent, B. & O. R. R., Balto., Md.

THE
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ORIGINAL ARTICLES.

THE PROTECTIVE POWER OF VACCINATION.*

J. W. H. BAKER, M. D., Davenport, Iowa.

It is unnecessary to relate the history of the discovery of the protective influence of cow-pock virus against the contagion of small-pox made by Dr. Jenner. The discovery was made about a century ago, in 1797, since which time vaccination has been an art more or less practiced by the medical profession the world over. I therefore, limit myself to a few thoughts upon the written evidence of the *Protective Power of Vaccination.*

Prior to the discovery of vaccination for the prevention of small-pox, this disease was evidently the most destructive disease known. About 1520, it prevailed in Mexico, in which country it is reported to have destroyed three and a half millions of people. In 1707, it was introduced into Iceland where more than a fourth of the whole population fell victims to it. It reached Greenland in 1733, when it spread so fatally as almost to depopulate the country. Armies have been scourged by it and rendered helpless during their campaigns. Even now the announcement of its prevalence in town or village creates an unusual excitement or even a panic. What greater blessing could have been bestowed upon mankind than to remove this great fatality, and to relieve the people from the fear of destruction by such disease? The discovery of the power of vaccination has accomplished this, and at present it is no uncommon thing for people to assert that they have little fear of small-pox, or that they would rather have an attack of small-pox than any other prevalent epidemic disease, such as diphtheria, scarletina, or even measles.

What a change! And this all brought about by the discovery of and practice of vaccination.

Since small-pox is of such deadly character and is so much to be dreaded, it is not strange that at an early day—that is centuries ago—an effort to palliate its effect upon the people should have been made.

The first really practical effort to counteract or modify its effect or its general fatality was made by the introduction of the method of vaccination, or ingrafting persons with small-pox matter; either with the lymph from a genuine small-pox vesicle, or with the crust, or by an exposure of the person to a patient suffering with this disease.

This method of treatment came into notice more completely about 1715, and was introduced into England about 1721, and after a long trial was generally adopted by the medical profession of those times. We find that about 1746 the Small-Pox and Inoculative Hospital of London was founded for the express purpose of extending to the poor the benefits which had hitherto been almost exclusively confined to the rich.

In this method the natural disease was induced after the patient undergoes a preparatory treatment and through the after treatment a mild form of the disease was

* Read before the Iowa and Illinois Central District Medical Society, April 12, 1894.

produced, affording the person subsequent protection to the infection of small-pox. This method of treatment, with varied success and much opposition, prevailed more or less until the discovery of the protective influence of cow-pox by Dr. Jenner in 1797, since which time, now almost a century, vaccination has become the only method of protecting the people from the devastating effect of small-pox.

The adoption of Dr. Jenner's discovery was a matter of rapid progress among physicians and among the people, and the *Discoverer*, as early as 1802, was awarded $50,000 by the English Parliament; which amount was, in 1807, increased by the award of $100,000 more. This would in its first estimate now be considered a generous award, but when we consider its effect as a life-saving measure, it would be thought as only a "drop in the bucket."

Among the first publications of Dr. Jenner's discovery it was asserted that through this, small-pox was disarmed of its terror, and that "its complete extermination might reasonably be contemplated."

In the third publication of Dr. Jenner, dated 1800, he expresses his confidence that "the cow-pox is capable of extirpating small-pox from the earth."

The fourth publication, in 1801, concludes with the statement, "that it is now too manifest to admit of controversy that the annihilation of small-pox, the most dreadful scourge of the human species, must be the result of this practice."

These were strong assertions which, although never realized, in my opinion might and ought to have been.

This leads me to the matter of general interest as to the opinion of the protective power of vaccination at the present time, and some of the causes of its failure.

There is little doubt that the medical profession generally of the present day believe in the perfect protection of the person who is completely or perfectly vaccinated. I quote: "The fact is conceded on all hands that the true '*vaccine disease*,' which is in all cases perfectly harmless, does, for a limited time, give almost perfect security against the contagion of variola."

In a report of Dr. Smith, of New Jersey, in 1858, he comes to the conclusions in regard to the protective power of vaccination which so nearly agree with my own, that I copy them.

"1st, That a *perfect vaccination* affords *perfect protection* from small-pox during life, and that if this is done in all instances soon after birth, small-pox may, as Dr. Jenner supposed it would, be *eradicated*."

Again: "That the common idea, that, the sorer the arm from vaccination the better the protection, is a mistake, and that a very small pustule which goes through the regular stages and produces a constitutional effect about the ninth day, is more generally perfect than one that produces great inflammation, pain and swelling, and affects the glands. Indeed, I am always suspicious of a case when this occurs, and take an early opportunity to revaccinate, and have often had my suspicions verified by a good pustule."

Dr. Francis Condin, the author of a work on Diseases of Children, says:—

"The evidence which has been accumulated in proof of the complete protection against the variolus contagion conferred upon the human subject by effective vaccination is too overwhelming and positive to admit of the possibility of doubt or cavil, and when cases of small-pox occur in persons said to have been vaccinated, it is evident that from some cause or other, the vaccination was an entire failure, or effective to only a partial extent."

Dr. Condin, after an investigation of many years as to the failure of vaccination to completely protect the person vaccinated, comes to the conclusion that "in the majority of such cases, the failure is able to be traced either to the employment of spurious matter, or through the fact that those operated on receive only partial vaccine infection from deterioration of the virus prior to use, or from an inefficient method of using the virus."

There are several causes by which vaccine-matter may be rendered ineffective or effete. After a genuine and perfect vaccine vesicle has been produced by the introduction of the most unexceptional virus, its regular course may be interfered with by some accidental irritation and simple inflammation set up, causing the vaccine lymph to become mixed with ordinary pus globules. Should the lymph formed in such a case be made use of for vaccinating, a sore arm will generally occur; but either no vaccine infection of the organism will be produced, or only to a limited extent insufficient always to insure complete and

permanent protection from various poison. A sore arm produced in this way has been not unfrequently mistaken for that of perfect vaccination: and such individual, reported to be protected from small-pox is sent forth to encounter its contagion with the liability to an attack of small-pox or of so-called varioloid disease. Therefore the protective power of vaccination is brought into disrepute, and the anti-vaccinationist is furnished with an argument against the protective power of vaccination.

There seems to be a medium effect in the action of the vaccine material which vaccinators esteem to be the most desirable, and, other than that, the protective power obtained therefrom is more or less defective.

I have referred to the too severe effect. I would now say that the deficiency of vaccine protection may be caused by too slight an extent of vaccine infection imparted to the system. This may be produced by the employment of effete matter, or virus that has lost from some cause its specific qualities; exposure to atmospheric heat or cold of too high or too low degree, may be cause of failure in the effect of the virus; and it is asserted by some observers that through a long series of transmission of virus without retro-infection through animal transmission, the infective power of the virus is impaired.

Dr. Gregory says, of the deterioration of vaccine virus, "This idea was never countenanced by Dr. Jenner and is not generally believed by medical men, but it is the favorite doctrine with the public. So far from believing in any deterioration of virus from successive inoculations, there is reason to believe that by careful selection of well predisposed children the pock may even be restored from an imperfect state, and by proper care, therefore, may be indefinitely retained in that condition."

Dr. Gregory specifies as sources of failure in complete protection by vaccination, the following causes: "1, spurious matter; 2, insufficient number of vesicles; 3, preoccupation of the skin by other diseases, such as tetter, ring-worm, erysipelas, etc.; 4, robbing the vesicle of its contents, as when vaccination is done from arm to arm; 5, external violence done the vesicle in its early stages by rubbing or scratching, etc." Of all these, the character of matter and the method of operating are the greater causes of failure.

The character of the virus at the present day is only to be considered under the heads *bovine* and *humanized* virus.

The use of humanized virus is usually known at present as the Jennerian method of vaccination, and under this method vaccination obtained its reputation. Its protective influence extended over the world, and was practiced from arm to arm. There was little controversy as to loss of power in virus for more than thirty years. But through traffic in vaccine virus, of late the reputation of original Jennerian, or humanized, virus has been more or less imputed to have lost its powers, and therefore several methods of renewal have been adopted to increase the power of the humanized lymph. The most extensive method has been that of retro-vaccination; that is by the introduction or inoculation of humanized virus into the animal and then using the lymph thus produced under the name of "*bovine virus.*"

This virus thus produced was supposed to be strengthened or renewed in its special protective power. Most physicians used for many years a small quantity of virus obtained from dealers in matter obtained in this way, as a starting point from which, by selecting virus from some exceptionally healthy child, they would continue a practice of vaccination indefinitely. The virus obtained by retro-vaccination was esteemed more for its convenience as a source of supply than as a matter of a superior quality.

Probably the most extensive operator in retro-vaccination in this country up to 1866, was Dr. Ephriam Cutter, of Woburn, Mass. He contracted and furnished large quantities of vaccine virus to the United States for use in the army during the late war.

The virus he used in vaccinating cattle from which he obtained crusts, was originally obtained from the vaccine vesicle on a child, and was reproduced in the kine. From this start, by continued retro-vaccination he obtained virus from more than a thouaand cattle. He subsequently made a report to the American Medical Association upon the production of vaccine virus (1872.) Some of the conclusions he arrived at were:

1. "Vaccine virus has been developed in this country by inoculating kine.

2. "Vaccine virus has been reproduced

by retro-vaccination in this country with success.

3. "The spurious cow-pock first described by Jenner is frequently observed in this country.

4. "The natural non-humanized cow-pock is endemic in this country, and only needs looking up to be discovered.

5. "It is therefore unneccessary to levy foreign countries for such virus.

6. "Except as regards purity from syphilitic taint, the virus from the cow has no special claims above the carefully selected humanized virus in ordinary use. But the resort to animal vaccination gives opportunity to procure at all times a supply of vaccine almost unlimited in quantity."

The Beaugency cow-pox virus, from which a renewal of the "stock" was made in Europe and introduced in its purity into the United States, was discovered in April 1866, by a French physician, Professor Depaul. Dr. H. A. Martin imported the virus from the "stock" in 1870. The virus brought to America was from the 258th, 259th and 260th animals of Dr. Depaul's series, beginning with the heifer of Beaugency. It is generally supposed that since the introduction of this virus into America it has been perpetuated through animal transmission to the present, and in a measure constitutes the material from which the majority of vaccine virus is offered by the producers on the different vaccine forms of this country.

There has been much discussion as to the use of bovine virus *direct* and the bovine virus of *long humanized variety*.

In an article written by Dr. S. C. Martin and published in the *Boston Medical Journal*, Dec. 16, 1885, the writer makes the assertion that, "It is no longer possible here to observe the effects of long humanized virus. There is probably now none of it in this country; that which passes under that name being but a few human removes from the cow." This assertion drew forth a controversy between Dr. Chapin, of Providence, R. I., and Dr. S. C. Martin, in regard to the possibility of obtaining long-humanized virus for the purpose of comparing the merits of the two kinds. Dr. Chapin says: "I desire to call your attention to the fact that humanized virus has been used continuously by this department (The Health Department of Providence, R. I.,) since 1856, (over 30 years.) The stock has been maintained by continuous transmission from child to child, without being once renewed from the cow; and tradition says that the virus first used in 1856 was of Jennerian stock introduced into this country by Dr. Waterhouse. As a support of the belief in this tradition I introduce the following:

"Dr. E. M. Snow, Superintendent of the Department of Public Health at Providence, writes, March 1883, 'The practice of vaccination was introduced into New England by Dr. Benjamin Waterhouse in the summer of 1800, about three years after the discovery of Dr. Jenner. Physicians generally adopted the practice and there were some persons, not physicians, who made a business of vaccination, travelling about the country for that purpose. Among these was Artemus Stebbins who, when 18 years old, in 1806, lived with Dr. Waterhouse and learned the art of vaccination. He made it a business for life; travelling extensively in three of the New England States, vaccinating for a small fee. He told Dr. Snow not long before his death, that he had vaccinated over 138,000 persons. Sylvanus Fancher likewise learned the art of vaccination of Dr. Waterhouse, and in 1810 was employed to vaccinate the people of Providence. He vaccinated 4,305 persons and was paid by the town $233.25 including six weeks board at $3 per week, recciving therefore exactly five cents each for those vaccinations.' Subsequently the plan was adopted of weekly vaccinations made at the Health office, with a record of all vaccinations performed. In 26 years there were 28,365 persons vaccinated at that office, an annual average of 1091." These were all done with what is supposed to have been the Jennerian stock of long-humanized virus and Dr. Chapin says, in 1885, "nearly 47,000 persons have been vaccinated with this virus here and our experience has been that while it is certainly not inferior to the bovine virus in protective power, it is decidedly superior to it in that it is much more certain to 'take' than any animal virus we have been able to obtain."

In 1887, Dr. Welch, of Philadelphia, says, "From hospital experience I believe that vaccination has absolute power of preventing small-pox. He preferred humanized virus." Dr. Day, author of

Diseases of Children, says, "I prefer vaccination from arm to arm."

Dr. Welch, in Hare's Practical Therapeutics, writes—"I have never been able to succeed well with animal lymph. It is too unreliable, and when it does succeed in inducing vaccinia, the process is usually so slow that it does not reach the stage at which protection is exerted, before symptoms of small-pox appear. I know of no virus that is more reliable or will give better results than eight-day lymph, taken directly from a typical vaccine vesicle on the arm of an infant—but this virus can seldom be obtained when needed for the purpose; next to it I prefer humanized virus in the form of crust from a healthy infant, and I have a very decided preference for that which has resulted from a long series of human transmissions."

New York Medical Journal, May 31, 1884, Page 614, says: "Dr. M. F. Bassett, of Quincy, Ill., before the Illinois State Medical Society, read a paper in which he took the ground that humanized virus had been shown by long experience to be preferable to bovine virus. For his part he preferred that those of his patients who refused to be vaccinated with the former should bear the responsibility; for he would not use the animal virus."

In an article on vaccination, Dr. Walter F. Atlee, of Philadelphia, (*American Journal of Medical Sciences*), quotes a Dr. Stevens, of the Medical Department of Local Government Board, as saying, in relation to the supposed deterioration of humanized vaccine lymph in his country, *apropos* of the question of animal vaccination. "He believes that he has examined more vaccinated children than any man alive, or who ever lived. He finds no ground whatever for the suspicion that the present arm to arm lymph has lost its true and original Jennerian character. He denies it altogether and says, 'I do not believe that our arm to arm lymph affords any less protection than it ever did."

Dr. Atlee of Lancaster, father of Walter, says, "I fully agree with Dr. Stevens. He says he has studied the disease and its effects with extreme care, from 1818 to the present time (1880, over sixty years,) and I find now no difference in its appearance or in its preservative effect from what they were at the first." Dr. Atlee continues, "My father adds, 'I have in almost all instances used the crust, sometimes have punctured the vesicle and taken the lymph on glass. In a few, very few, instances among the thousands I have vaccinated, I have taken it from arm to arm. But I never could perceive any difference and I believe one is no better than the other, each producing all the well-marked diagnostics of genuine vaccine pustule.'

"I have tested the efficacy by inoculating for small-pox after vaccinations, have taken patients after vaccination to cases of malignant small-pox in small and hot stove rooms and exposed to the foul atmosphere for fifteen or twenty minutes, secure from danger. In one case, of a mother with six unvaccinated children, one at the breast, who had a severe attack of small-pox, as soon as I discovered the nature of the case, I vaccinated all the children from a vaccine crust and they all took the vaccine disease; the room, it was in February, was a small ten by twelve foot room with a hot ten plate stove and but one bed, on which they all slept and which was saturated with small-pox contagion, yet these children picked off the scabs from their mother's body and the baby nursed at her breast and no one took the small-pox. Had I time this morning I could multiply instances of this kind. I have the utmost confidence in the protective power of vaccination and I feel very sure that the cases of failure are very much more attributable to the use of vitiated vaccine matter, to the ignorance of unprofessional persons as to the purity of the virus, who have practised vaccination and, in my experience, to the carelessness of physicians themselves as to the conditions of the patients vaccinated." The above tests reported by Dr. Atlee can no doubt be duplicated by physicians present, and with the multiplicity of such evidence it is strange that any person should doubt the protective power of vaccination.

The kind of virus employed or recommended at the present time is largely in favor of what is termed *direct bovine virus*. With this recommendation I must say that I differ, and when I can get good humanized virus from the arms of healthy children, whose health record extends back some two or three generations, I much prefer such. I must therefore acknowledge that I am "*a barber*," according to a recent

writer who advocates the use of animal virus. He writes, "It is pleasant to note the progress that has been made in the use of animal virus; with the exception of *barbers*, there are, at the present, very few who do not use it in preference to humanized virus."

From my experience with the two kinds of virus, I attributed most of the severe sore arms, of phlegmonous, erysipelatous or septic character, to the use of improperly charged animal vaccine points, and I am supported in my opinion by many writers upon the subject of vaccination. These sore arms constitute one of the stray objections to being vaccinated at present.

In a discussion upon this subject and the difficulty of obtaining pure and efficient animal virus. (*Boston Journal*, March 15, 1883), Dr. Martin made startling statements concerning the traffic in this commodity, viz: "Material which ought to be thrown away, crusts, epithelium, etc., is mixed with glycerine to form a paste. This costs almost nothing and sells at an immense profit. The virus at Titusville, Georgia, affords a case in point. It costs but a cent a patient, and the public vaccination was intrusted to a 'cancer doctor.' Horrible results followed, the virus took so thoroughly that the victims had to go to bed. "Extensive axillary abscesses in some cases were but a small part of the mischief. Such practice as this and other instances, has brought reproach upon animal virus which it can hardly stand up against."

A physician, whose advice was given to the public recently in our daily papers, says: "Be sure and get fresh bovine virus. It should not be over ten days old, as after that period its vitality is uncertain. Use no scab or lymph from a child or other person." This advice evidently comes in as contradictory of most of the authorities I have quoted, and agrees with the attempt to prove superiority in quality and effect which the dealers in bovine virus wish to impress upon the people. This advice is, as I believe, mostly to the advantage of the trade and against almost all the opinions of experienced vaccinators.

Humanized virus and animal virus may be preserved indefinitely in all its vigor and purity by several methods. I have been accustomed for many years to keep myself supplied with vaccine crusts taken from healthy children at about the twentieth day, by embedding them in small blocks of white wax, perfectly sealing them over the heat of an alcohol lamp and laying them away for future use. I know that virus preserved in this way retains its specific infection for years. In 1885, Dr. C. H. Preston was desirous of vaccinating some children. He came to me to obtain some virus. I gave him a portion of crust which I had enclosed in wax in 1882, three years before. He used the same and reported a perfect result, and returned to me a characteristic crust from a child he had vaccinated with it. I exhibit the crust to the members present, together with a crust which I put up in 1882, showing a comparison of the two, from which comparison you will see that there is no evidence of loss of power. I find the following published in the *New York Medical Jour.*, July, 1884, page 84—under the title, Activity of an Old Vaccine Crust: "A remarkable instance of the preservation of the activity of a vaccine crust, is related in a recent issue of the *North Carolina Med. Jour.* It seems that during the term of office of the Hon. Willis Alston (grandfather of Dr. Alston) as a Congressman from North Carolina from 1803 to 1825, Dr. James Smith, of Baltimore, was director of the vaccine institution for the State of Maryland. He sent to Mr. Alston a package of vaccine, and it remained unopened until it fell into the hands of his grandson, Dr. Alston, in May, 1869. It was a crust embedded in wax and enclosed in a wooden box. Dr. Alston vaccinated his servant with a part of the crust, and in due time it took effect, leaving a well defined scar." With vaccine crusts preserved in this way by any physician and kept on hand, he is prepared to vaccinate persons who have been exposed to this contagion, at the shortest notice, or in any emergency. To thus use the vaccine crust I can see no objection.

Dr. Wm. M. Welch, Physician-in-charge of Hospital for Infectious Diseases at Philadelphia, March 24, 1894—after a a service of twenty-three years—says: "I am firmly of the opinion that if all persons were properly vaccinated in infancy, and again at the age of puberty, Jenner's prediction as to the power of this agent to extirpate small-pox from the globe, would be realized. And I would add small-pox could only be found when we are able to *navigate the aerial space and reach the stars.*"

CONTRIBUTIONS TO OBSTETRICS AND DISEASES OF WOMEN.*

[NUMBER TWO.]

THEOPHILUS PARVIN, M. D., PHILADELPHIA.

CURETTING THE UTERUS AND AMPUTATION OF THE LIPS.

Mrs. —, about thirty-five years of age, has given birth to three children at term, and since her last labor has had three miscarriages. One of the latter ended at about six months, and the product expelled presented that form known by the old authors as a fleshy mole; another occurred at the end of the third month of pregnancy, and then too, a fleshy mole was expelled. I attended her in each of the last two miscarriages.

After convalescing from the third abortion, she consulted me for leucorrhœa, pain in the right side, back ache, and especially with the hope that something could be done to prevent the recurrence of the accident from which she had thrice suffered. I found the uterus by the sound to measure a little more than three inches, no eversion of the cervical mucous membrane, and a bilateral tear of the cervix, the anterior lip mitriform, but the posterior somewhat broader and shorter.

Menstruation was quite regular, and neither profuse nor painful.

For a few months I treated her with local applications of iodine, etc., and had injections of creoline and hot water used daily. There was some benefit, but no cure.

I then, the patient of course being anæsthetized, and the external parts being thoroughly disinfected—by soap and warm water externally, followed by vaginal injection of a solution of carbolic acid—curetted the uterus, injected Churchill's tincture of iodine, and amputated a portion of each lip. After excising a wedge from each lip, the gaping surfaces were brought together by silk-worm gut sutures—not having at hand any sterilized cat gut, which of course is the preferable material in such operations—all the steps in the operation being taken under continuous irrigation of the parts with a three per cent. solution of carbolic acid. In the curetting a Martin's dull curette was used, and the iodine injection made with Braun's syringe. She was in bed ten days and the stitches were removed.

In six months after the operation she became pregnant, passed through her gestation without any serious discomfort, and without the slightest threatening of miscarriage, or of premature labor, and gave birth at the normal period to the largest child she had ever borne, the labor briefer and the suffering less than in any of her previous experiences. Both she and her child have remained, now several months, quite well.

Reflections.—Some two years ago I published a study of fifty-four cases of molar pregnancy, several of them being furnished me by my friend Professor Winckel, chiefly from the records of the Munich Frauen-Klinik: these were all instances of the expulsion of a fleshy mole. In that study I came to the conclusion that the affection was in most cases caused by disease of the chorion. This view I am inclined now to doubt, and believe the disease is primarily in most cases, in the decidua, and the affection of the chorial villi is secondary. It seemed to me, therefore, that the best way, the only right way in short, to prevent this patient from having miscarriages was to have a healthy lining membrane of the uterus. Having failed by the more common treatment of the uterine catarrh, catarrh of the body not of the neck, I employed the curette, and followed it by the injection of a solution of iodine. I know that the curette is condemned by some, and that grave accidents have occasionally followed its employment. But were the cases in which accidents followed such as required this treatment, and were necessary antiseptic means used in the operation? I have curetted in many cases of endometritis, and have never met with unpleasant consequences.

I have rarely found a case in which previous dilatation, either gradual or instantaneous, was necessary, for the discharge generally keeps the canal sufficiently patent to prevent this preliminary of some.

The proper treatment of a torn cervix can

not in all cases be settled by an appeal to the brilliant operation devised by Dr. Emmet. In some cases his cervicoplasty gives all that can be desired. But if there is present with the tear of the neck an endometritis, the operation for the former does not cure the latter—nay, makes the interior of the womb less accessible for therapeutic agents. An operator once told me that he so perfectly restored the cervix that the os, though the woman had borne several children, could not be distinguished from that of a virgin. Now this is not nature, and I have more than once had greater or less difficulty in consequence of such perfect restoration, in treating a diseased endometrium.

Further, suppose that in a bi-lateral laceration there is hypertrophic elongation of the lips, there will be after cervicoplasty a cervix of more than normal length, a condition which is evil rather than good. I am satisfied that in some cases of tears of the neck of the womb amputation is preferably to paring and stitching. So too, such amputation, or excision of a portion of the lips is preferable to Sänger's substitute for Emmet's operation. In Sänger's method the flaps dissected on each side of the rent remain attached to each other at the apex, and each flap is attached at its lower part to the cervix; then the denuded surfaces are stitched together. The flap is thus pushed downward by the approximated borders as the sutures are introduced from above below, and this inevitably results in a greater or less projection of tissue at the base of the united tear.

But without any further discussion of the treatment of endometritis and of tears of the neck, in regard to the case that has been reported, the result is to my mind, sufficient proof, as it will be I think to the minds of others, that the plan pursued was appropriate.

NOTES UPON THE ELIMINATION OF URIC ACID.

W. H. WALLING, M. D., Philadelphia, Pa.

It seems to be the accepted opinion that the pathology of uric acid is more a matter of defective elimination than of excessive formation. The physiology of the subject, however, is not yet settled. Indeed, much remains to be learned regarding the question. Some writers suppose that the defect lies in a functional disorder of the liver. Others on the other hand, contend that lithemia has little or nothing to do with disturbance in the function of the liver, and that it has not been shown that uric acid is the only, or the chief agent in producing the symptoms.

Osler says, "That certain symptoms arise in connection with defective food or tissue metabolism, more particularly of the nitrogenous elements. This faulty metabolism if long continued, may lead to gout, with uratic deposits in the joints, acute inflammations, and arterial and renal disease."

This statement seems to contain all, or nearly all that we know of the physiology of lithiasis, which is really very little.

The substances mostly relied upon to eliminate uric acid from the system are the alkalies, such as the salts of lithium and sodium, the various salicylates, and latterly a preparation called piperazine. From some experiences with the latter substance, it would seem that the simple solution of the acid is not all that is to be aimed at. Perhaps, however, I have not given it sufficient trial.

Regarding lithia, Haig says: "Though a beautiful solvent of uric acid in the test tube, yet when given to the human subject by the mouth it never reaches the uric acid at all, because it at once forms insoluble compounds with the phosphate of soda in the blood, thus removing from that fluid one of the natural solvents of uric acid, and diminishing its power of holding uric acid in solution." This is in direct opposition to the generally expressed opinion regarding the use of the lithium salts in the uric acid diathesis.

I have for a long time been dissatisfied with the results obtained from the use of lithium in lithemic conditions, and more especially where there were effusions around the joints, with other symptoms connected with what is commonly regarded as being due to a so called excess of uric acid.

Furthermore, not getting the desired results from simply stopping the apparent excess by the use of substances claiming to effectually remove such excess, I questioned still further, the commonly accepted theories, and was finally led to adopt an entirely different line of treatment. This was done by dropping all the so called anti-lithics, and in relying simply and solely upon a single remedy, and that was a preparation of cascara sagrada. Repeated trials have convinced me that the faulty metabolism is more quickly remedied with this drug alone, than with any other, or combination of others, thus far experimented with. Just how it does it I may be unable to make clear, even to myself. In fact, I do not try to, but in a number of instances I have demonstrated the fact to my own and the patient's entire satisfaction. This has been sufficient.

One case only will be mentioned, as it is typical of others, and will illustrate my statement as well as a dozen or more.

Mrs. G., aged fifty-five, has for years, according to the history, been the subject of uric acid storms. Being of a naturally robust constitution, she withstood these fairly well, apparently making quick recovery. As time wore on however, the results began to be more manifest in enlarged and very painful joints, as well as showing other symptoms peculiar to this diathesis. The usual remedies were administered and applied with some amelioration of the symptoms, but without getting the desired relief. After exhausting all the commonly accepted remedies without avail, I commenced the exhibition of the aromatic fluid extract of cascara sagrada, made by Parke. Davis & Co., in ten drop-doses to fifteen drop doses, two or three times a day as the case demanded, finally settling down to one single dose at the close of the day. Active catharsis was not aimed at, but a gentle laxative effect was constantly maintained for a prolonged period. The effect was not at once apparent, but within two weeks there was a marked amelioration of the aggravated symptoms, and in four weeks time the swollen joints had almost resumed their normal appearance, the soreness having nearly disappeared. At this writing, [nearly two months having elapsed,] there is no complaint whatever, but I directed the remedy continued. No change was made in the diet in this case, as I desired to more fully test the remedy, and am fully satisfied that the good results were due solely to the cascara. I may add that I have tried other brands of cascara, but they have not been satisfactory, hence I have come to regard the fluid extract above alluded to, as the only one upon which I could confidently rely. It never fails, hence my prefcrence for it.

This extract is an invaluable intestinal tonic in chronic constipation, and other disorders of digestion. The dose must be regulated to suit the case. Ten to twenty-five drops, once, twice, or three times a day, as may be required, given in water or milk, either hot or cold, as may seem best, but I prefer the hot diluent. I find that it is better to give it about an hour before meals, or at bed-time. The extract as now prepared, is very palatable, being entirely devoid of the old-time bitterness, so characteristic of many preparations of cascara. I have also found it difficult, at times, to get the article prescribed, hence frequently purchase it at the wholesale house, and dispense it myself. In this way there can be no substitution.

The Acid Treatment of Jaundice.

Dr. M. Alivia, of Viterbo, at the recent meeting of the International Medical Congress at Rome, read a paper on this subject. He based his treatment principally upon the fact that there is present in jaundice a general diminution of acidity in all the fluids of the body. The contents of the stomach show generally an alkaline or neutral reaction, and contains very little, if any, hydrochloric acid. The urine is often alkaline, and contains more chlorides and aromatic products, but less urea, than normal urine. The acids of the bile are reduced, which occurrence probably depends upon stasis of bile in the liver. Under acid treatment the stomach contents and urine soon regain their normal reaction, while the chlorides and aromatic compounds are reduced, with a corresponding increase in the quantity of urea.

Dyspepsia and Tuberculosis.

Prof. Hayem, of Paris, has recently shown that there is a marked association between dyspepsia and tuberculosis in a great number of cases. The disorder most commonly present is simple gastritis. As the digestive disorder usually occurs first, and paves the way for the pulmonary disease, it is important that disorders of digestion should receive prompt attention.

COMMUNICATIONS.

OVARIAN TUMORS.*

L. S. MCMURTRY, M. D., Louisville, Ky.

The subject that I want to introduce to the society this evening is one which it occurred to me would be of interest to all the fellows,—a very common condition, that of ovarian tumors. Mr. Tait has said that the last words had been spoken upon this subject, when he had reported 134 consecutive ovariotomies between two deaths, stating that the operation was the most successful major operation known in surgery. It is an operation that interests everybody, because ovarian tumors are the most common of all tumors of the pelvic organs, and there are still some points in this connection that deserve attention.

In the first place the mortality has been reduced in ovariotomy mostly from the fact that the operation stands so very well with the profession and with the laity that the surgeon is consulted very much earlier than in former years. It has only been within a few years that a number of fallacies have been completely and entirely refuted in regard to these tumors. If we take the old masters' statements in this branch of surgery, we find that such eminent surgeons as Peaslee and Sir Spencer Wells advocate as one of the steps preparatory for ovariotomy, that the patient ought to be allowed to become emaciated, as it prevented inflammation afterward. This will be found in Peaslee's work on ovarian tumors, and also in Sir Spencer Wells'. That fallacy has been completely refuted, and the mortality has been reduced just in proportion as the operation is done early. It falls to the lot of every practitioner of medicine to meet these cases of ovarian tumors, and just as the diagnosis is made more easily and accurately and operated upon earlier, has the mortality been reduced.

In regard to the operative technique, there is very little to be said. I do not believe the profession now considers either the long or short incision as having a great deal to do with the mortality. The older ovariotomists thought this a very important factor. The most important thing in relation to ovariotomy is to see the patient early while she is in good condition for operation; next properly preparing the patient for operation. The latter is of far more importance than any other single feature connected with it. After putting the patient to bed for some days before the operation, she should be thoroughly purged and fed upon very light diet so as to get the intestines empty; by this means the operation is facilitated and convalescence is accelerated.

I want to illustrate a few points with a tumor I removed last Saturday from a young lady nineteen years of age, the daughter of a physician, which grew to very large proportions. It is a multilocular cyst. The fluid in one part of the cyst is so thick that it will run through a trocar. There are two large and several smaller cysts, the mass being so great that it pushed the abdominal viscera tightly up against the diaphragm causing serious interference with the respiratory functions. Aspiration was practiced on several occasions when the tumor reached such large proportions, refilling shortly afterward. On three occasions the young lady determined to have the operation done, and went to the train to come here for the purpose, and three times went back home refusing. She came here once and just on the eve of the operation backed out again. Meantime the tumor continued to increase in size; this was nearly two years ago. She became very much emaciated, the tumor was very large and she was finally persuaded to consent to the operation.

Ovariotomy was performed last Saturday morning, and convalescence has been uneventful and easy. The tumor had attained such enormous size that it necessitated an incision through the umbilicus. The pedicle was very broad but ligation was comparatively easy. The other ovary

*Read before Louisville Clinical Society, March 13, 1894.

was found to be cystic and was also removed.

There is another point in regard to treatment of these tumors or abdominal section for any condition which I would take occasion to mention in this connection, and that is the fact that we can entirely abolish the use of opium. I believe this can be done in the majority of instances, and I believe it to be due more than anything else to the fact of the introduction into this department of surgery of skilled nursing. Every case of abdominal section will require an opiate without a competent nurse, and after the opiate has been given a great deal of nursing will be required; but by the attentions of a good nurse in assuring the patient, in bathing her hands and head, changing her position and encouraging her in every way to do without it for the first twelve or twenty-four hours, its use can be avoided.

In the case I have just reported, not a single dose of opium was administered, her pulse has never been above 84 and she is making an ideal convalescence.

In regard to the diagnosis of these tumors: It is very common for physicians in general practice and for surgeons also to be severely criticised by the laity for failure in diagnosis. I know it is very common when a physician refers a patient to the surgeon, and it is reported after they reach the city that the condition is an ovarian tumor which was not previously diagnosed by the physician, that he is severely criticised. They go so far as to say that the physician did not know what it was, but when the patient reached the hands of the surgeon he found it to be ovarian tumor and removed it. I think it is the duty of everybody to promulgate among the laity the fact that nobody can make a diagnosis absolutely of ovarian tumor in certain cases. I will refer to a case that I reported to this Society last July in which three very superior practitioners and surgeons had diagnosed the case to be an ovarian tumor. When an incision was made in the abdomen the tumor was found to be a large cyst of the left kidney, and a nephrectomy was immediately performed. So the diagnosis of these tumors becomes a matter of very great difficulty, and the only diagnosis that is absolutely perfect is an incision through the abdominal walls.

FIBROMA OF THE UTERUS.

No. 2—This tumor, which you will see is a fibroma of the uterus, was removed this morning. And in this connection I will make a continued report at the last meeting of this Society at which time I exhibited the specimen and also a photograph, showing the peculiar conformation of the tumor.

The patient has made an uneventful and uninterrupted convalescence; she is now sitting up and practically well. It was only a short time ago that the profession was taught that fibromata of the uterus was harmless; that they amounted to almost nothing; they were treated with ergot, etc., I believed to be greatly benefitted; electricity was also used, patients were often told that the tumor would go away at the menopause without treatment. Perhaps they did—I say perhaps they did, because I formerly believed more than I do now that they did go away spontaneously; but it must be remembered in every case where the surgeon or physician makes the observation that these tumors disappear spontaneously, that the diagnosis is never perfected. The only cases of that kind which are reliable are those in which an exploratory incision is made and the tumor not removed, and it afterward disappears. In the early stages of these growths when the tumor is not large and degenerative changes have not taken place, the removal of the uterine appendages is a most satisfactory operation. A number of cases I operated upon five years ago, which are still under observation, removal of the uterine appendages has caused the tumor to shrivel up so as to cause practically no trouble. Treatment by means of electricity has been pretty generally abandoned, as experience has proven that it does not cure. When the tumor has attained the size of the one shown here to-night, pressing upon organs causing distressing symptoms, the proper procedure is to remove it; then again these growths are very prone to undergo malignant degeneration. I have operated upon several cases where I thought I was dealing with a simple fibroma, when examination showed that sarcomatous change had taken place.

In regard to the operation itself: I am perfectly satisfied that the exact technique of the operation will always vary, different operators having their favorite way of deal-

ing with the tumor. Dr. Cartledge has just expressed his preference for the intra-peritoneal treatment of the stump, cutting down to the cervix itself, and applying a direct ligature to the uterine and ovarian arteries. We all recognize that the greatest danger in the operation of hysterectomy is hemorrhage. The tumor leaves a stump that is composed of muscular tissue, and after the anæsthetic is eliminated by the patient this muscular structure is very liable to undergo contraction and the ligature may slip off from it.

I believe that in the extra-peritoneal treatment of the pedicle, we have the easiest, surest and safest method of dealing with these tumors. We must not lose sight of the fact that the greatest danger is from hemorrhage. Dr. Cartledge in his remarks has alluded to a method which embraces the real secret of the operation —to deperitonize the tumor and enucleate it, leaving the peritoneum, stripping off the bladder in front and the rectum behind, putting a *neude* around the pedicle with the peritoneum included, then you have everything outside the peritoneum when the incision is closed. By this method the field of operation is brought entirely out of the abdominal cavity, and the tumor can be treated just the same as a growth upon any other portion of the body.

The operation in the case I have reported was difficult because the pedicle was so short. The pedicle ought to be very small, and the greatest objections that have been found to the extra-peritoneal method of treating the pedicle with the *neude* is that it leaves a large slough. This tissue is very easily broken down, and even large quantities of it can be included in the *neude* with the pedicle without causing any trouble. In every case where I have used the *neude* there has not been a drop of pus, and no moisture at all, just a dry caries or mummification of the pedicle, leaving a granulating surface.

Considerable advance has been made within the last two years in the operative treatment of these tumors, and in case it comes up in the discussion, I could present cases that would leave no doubt in the mind of anybody concerning the fatal character of these growths. I have in mind one lady in this city who was in bed with feet and legs œdematous, great pain, vomiting daily, and before operation she was practically in a dying condition.

Some of these tumors are slow in growing, others grow very rapidly. They destroy life and are serious conditions of disease. I have no doubt after the progress we are making, the results that will be obtained from operative treatment of this class of tumors within a year or two will be just as favorable as obtained in ovarian tumors. The results in all instances both in ovarian and fibroid growths depend more than anything else upon the time the case is operated upon; it should be done before the system has been exhausted, before emaciation has occurred, and before degenerative changes are established.

Thiol in the Treatment of Female Diseases.

Gottschalk, after using thiol for nine months, believes it to be as efficacious as ichthyol in the treatment of female diseases while its freedom from odor is a positive advantage. He first employed thiol in the treatment of parametritic and perimetritic exudations. He introduced tampons saturated in a solution of thiol in glycerine (10 to 20 per cent.) into the vagina, renewing every day or every other day. At the same time he applied to the abdominal wall a thiol salve of the same strength. The tampon causes a sensation of abdominal constriction, accompanied by an abundant vaginal secretion, which ceases upon the removal of tampon. Thiol applied to the skin produces effects similar to those of iodine, and after daily applications of the salve for six or eight days, it is necessary to wait a few days before continuing its use Gottschalk has seen extensive pelvic exudations disappear in a few weeks under the influence of this local treatment supported by the internal administration of thiol. In recent and chronic forms of endometritis he introduces into the utterine cavity, by means of a Playfair sound, small cotton tampons saturated in pure liquid thiol. These topical applications are painless and inoffensive. They do not excite uterine colic or perimetric inflammation, even when removed every two or three days. They are, however, sometimes followed by a slight hemorrhage. He uses powdered thiol in cervical erosions with the best results. The only objection to the remedy is its comparatively high price.

TRANSLATIONS.

THERAPEUTICAL SUGGESTIONS FROM FOREIGN JOURNALS.*

LACTIC ACID IN CERTAIN FORMS OF CHRONIC LARYNGITIS.

Prof. F. Massei (*La Semaine Medicale*, No. 32, 1894,) in that form of chronic laryngitis which is met with in those who use the voice frequently, as singers, actors, preachers, professors, etc., and which disease is notoriously rebellious to treatment, has obtained actual cures by spraying with 2 per cent. solution of lactic acid. To succeed it is necessary to spray the throat very often, from eight to ten times a day, for some time; at the same time one should not neglect the usual hygienic measures, and he also advocates electricity and tonics. It is best to use a spraying instrument which produces a fine jet of spray and not a too diffuse cloud. This treatment, though not infallible will often succeed, and it has the advantage of being easily carried out by any one. This remedy in a spray form is also useful in tuberculosis and lupus of the larynx if alternated with one of corrosive sublimate.

TREATMENT OF TUBERCULOSIS BY COPPER.

Dr. Luton (*Le Bulletin Médical*, No. 41, 1894), speaks highly of the salts of copper in the treatment of tuberculosis. It appears to be an especially valuable method when the disease is external and the lesions are not too far advanced. At a more advanced period this result is obtained with greater difficulty, though it may be assisted by surgical means, and in pulmonary tuberculosis a condition equivalent to recovery may result. It may be given either internally, hypodermically or be applied externally. Hypodermically injected there is observed to follow a local inflammatory reaction. Locally, one may use the following:

℞ Acetate Copper,.....0 | 03 (gr.ss.)
White Vaseline,.....30 | 0 (℥j.)

HYDRASTININE IN UTERINE HEMORRHAGES.

Dr. Kallmorgen (*La Semaine Médicale* No. 30, 1894,) has employed this remedy in eighty-six cases of uterine hemorrhage of various origin and followed the patients for two years and a half, with a view to the final and definite results. He employed the following formula:

℞ Muriate Hydrastinine,..... 1 | 0 (grs. xv.)
Extr. and Powder Licorice. q. s. for thirty pills.
Three pills a day.

These pills have been well tolerated excepting in occasional cases where they gave rise to painful contractions of the uterus or slight gastric intolerance. The hemostatic action varied according to the cause of the hemorrhage. In retro-uterine hematocele, of which he observed five cases, the results were particularly remarkable. Indeed, in all cases the sanguinous discharge ceased rapidly. Functional hemorrhages were second as to hemostatic effect. Out of twenty-five cases in eighteen the flow was definitely reduced to normal proportions, and the accompanying dysmenorrhœa was either cured or considerably improved. Here it was only administered during the menstrual period. One or two days before the appearance of the menses the patients began taking two pills a day; during the period three pills a day were given, until all flow had ceased. The remedy acted very well in hemorrhages after abortion fifteen times out of eighteen, and in lesions of the uterine appendages, three times out of four. The results were much less favorable in hemorrhage from chronic endometritis, beginning abortion, and worst of all, in hemorrhage from fibro-myomata. Finally in hemorrhages from cancer of the uterus it was wholly without effect.

PALMAR ECZEMA.

Dr. J. Braun (*La Semaine Medicale*, No. 30, 1894) recommends the following solution and salve in palmar eczma, of professional origin:

℞ Caustic Potash..... 1 | 0 (grs. xv.)
Destilled Water..... 2 | 0 (gtts. xxx.)

℞ Nitrate Silver..... | 25 (grs. iv.)
Lanoline.....20 | 0 (℥v.)
Liquid Vaseline..... 4 | 0 (℥j gtts. xv.)

* In charge of the Translator, F. H. Pritchard, A. M., M. D.

Touch the eczematous spots with a few drops of the alkaline solution and then apply, three times a day, the nitrate of silver salve.

URINATION AFTER LABOR.

Dr. N. Recht (*Revue Internationale de Bibliographie Medicale*, No. 9, 1894) in a thesis has made a study of micturition in the lying-in period. He comes to the following conclusions:

1. Urination after labor in the majority of cases, follows spontaneously.

2. Catherization is but exceptionally required; if it be necessary it should be deferred as long as possible.

3. It is only indicated when the bladder assumes abnormal proportions, or if retention occur.

4. Catherization is liable to expose one to two dangers: cystitis in spite of all precautions, and dependence of the bladder for a time upon the catheter.

ICHTHYOL IN EXCORIATIONS OF THE FEET.

Dr. Hertz (*La Semaine Medicale*, No. 32, 1894) in excoriations of the feet in soldiers, especially from pressure and friction of the shoes, has found a 20 per cent. solution of ichthyol to serve excellently. Under its influence the swelling disappears in twenty-four hours, and healing follows rapidly.

TREATMENT OF DIPHTHERIA.

Dr. Béla-Bathory (*Journal de Medicine de Paris*, No. 21, 1894) in diphtheria employs the following formula:

℞

Tr. Myrrh	4	o (℥j.)
Glycerine	8	o (℥ij.)
Destilled Water	200	o (℥j ℥ij.)

Children of two years or thereabout may take a teaspoonful every hour or two, those of three to ten years a dessertspoonful, and finally, those still older, a tablespoonful every hour or two. Local treatment may also be used at the same time, if thought necessary. The writer claims to have obtained very good results with this mixture. The tincture of myrrh has the peculiar property of destroying the ptomaines which pass over into the blood.

TREATMENT OF FAVUS.

Dr. Guladre (*Russkaja Medizina*, No. 5, 1894) has treated several cases of favus, with success as follows. After having first cut the hair short, he washes the patient's head once a day for five days with black soap. The sixth day he applies to his head a compress soaked with the following:

℞

Thymol	1 part
Chloroform	8 parts
Olive Oil	36 parts

Fix to the head with a dressing; repeat three times a day. After the softened crusts have loosened then epilate partially and rub with this mixture. After three or four weeks one may begin to rub the head with a mixture of two parts of iodine and one of glycerine, every day for a week. With ordinary measures a recurrence may be looked for in six to eight weeks, while with his method, he has not noted a recurrence in four months.

PRURIGO.

Prof. Petrini-Galatz (*Spitalul*, No. 8, 1894), in a lecture on prurigo, recommended in the simple form, local application of a salve, consisting of

℞

Vaseline	100	o (℥iij ℥j.)
Lanoline	20	o (℥v.)
Oxide Zinc		
Powdered Starch, aa	20	o (℥v.)

Also warm baths three times a week. Internally, arsenic.

TREATMENT OF OZENA, ETC.

Dr. A. Musehold (*Deutsche Medicinische Wochenschrift*, No. 20, 1894) in the treatment of ozena as well as in that of dry catarrh of the nose and pharynx, speaks very highly of the following formula:

℞

Pure Glycerine	70	o (℥ij ℥jss.)
Borax	20	o (℥v.)
Destilled Water	30	o (℥j.)

The physician sprays each nostril with about one ccm. of this solution and after a few minutes, removes the crusts, and then wipes the nasal and pharyngeal mucous membrane quite clean with cotton on a probe. The patient, provided with a cheap spraying apparatus for dense fluids, sprays his own throat twice or three times a day. With this treatment the odor will disappear in a few days, the crusts soon decrease, so that there will no longer be a necessity for the physician to clean the nose. During the first week clean the mucous membrane every day, then twice every two days, and finally at long intervals.

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SATURDAY, JULY 14, 1894.

EDITORIAL.

THE DANGERS WHICH LURK IN MILK.

Ample provision is made in the economy of Nature for the care and sustenance of the young of all forms of animal life until such time as they are able to provide for themselves. As we ascend the scale in the animal kingdom, we note two things—the increase of dependency on the part of the young, and the corresponding increased specialization of means for supplying the necessary food and protection. In man we reach, at once, the highest form of evolution together with the greatest degree of helplessness of the newly born and the highest devolopment of specialized provision for its nourishment. Nature has furnshed the human species, in common with the lower mammalia, with a typically perfect food in the form of a secretion from the mammary glands—milk. This secretion, which varies in different mammals according to the nature of each, is the ideal food for their respective young offspring. Similar in composition, the milks of different species vary mostly in the relative proportions of the component parts; and milk has been one of the most important food products throughout the history of the human race.

Partly on account of the irresistible human tendency to attempt improvement upon Nature, partly as the result of the artificial conditions of life developed by civilization, largely because the exercise of the natural functions of motherhood has gone out of fashion, it has come to pass that the vitrified abomination with its rubber nipple has to some extent replaced the living gland, and the milk of the lower orders of mammals, together with the various preparations secreted by enterprising manufacturers of infant foods, has been substituted for the food provided by Nature—the one food suitable for infant man.

When for any reason it was deemed necessary to feed an infant upon some substitute for its mother's milk, the milk from the cow, the goat, the mare or the ass, (as best suited to the individual fed) was used with perfect confidence so long as the source of supply appeared healthy

and the milk itself was fresh. Investigation and analysis having demonstrated the chemical differences between various milks, efforts were made to overcome the differences and prepare artificially a food in all respects equivalent to the normal maternal product. These efforts, more or less successful, have on the whole proved unsatisfactory.

Of late years bacteriologists, in their indefatigable pursuit of microbic game, have discovered that milk, so long esteemed the unfailing friend of suffering humanity, in reality is one of the strongest supporters of the allied armies of bacteria which are incessantly waging nefarious war against human life.

There is no doubt but milk does contain great numbers of micro-organism. Especially is this true of the milk supplied to large cities, which generally contains bacteria and the like in almost infinite variety and inconceivable number. A large proportion of this milk supply is not delivered to the consumer before it is forty-eight hours old; meanwhile, the methods ordinarily taken to preserve the milk have not been sufficient to prevent the growth and multiplication of the bacteria.

The very name, bacteria, inspires the popular mind with a vague fear of impending disaster, and is most universally associated with the idea of epidemic diseases.

As a matter of fact, in the light of our present knowledge, the vast majority of bacteria are perfectly harmless, if not actually benificent. But it has been definitely ascertained that a few species are mischievous and even malignant.

The matter of importance then, is not so much to eliminate all bacteria, as it is to prevent the contamination of the milk supply by those agents which we know to be harmful. Man from the beginning has used milk containing bacteria and, generally speaking, has used it with impunity; and it would be absurd to condemn the use of milk because of the presence of bacteria, without definite knowledge that it has been exposed to probable contamination from the mischievous forms of bacteria.

It has been proved beyond reasonable doubt, that diphtheria and scarletina, typhoid fever and cholera have spread through milk. It is now likewise asserted that tuberculosis may be conveyed by milk. Milk is also to be held responsible for the occurrence of cholera infantum, summer diarrhoea and similar intestinal disturbances.

In the case of contageous diseases the infection seems to be directly due to the bacteria contained in the milk, whereas cholera infantum and other intestinal troubles are caused by the ptomaines produced in the milk as the result of the presence of certain species of bacteria, and not by the bacteria themselves.

Tuberculosis is now recognized as contagious, and viewed as such, certain observations of the disease acquire a new interest.

Authorities agree that the greatest mortality from tuberculosis occurs during the first two years of life; and is greater in the first than in the second year.

Heller's investigations show that of ten thousand living, there die of tuberculosis, under one year of age, two hundred and forty-five. Between one and two years, one hundred and fourteen; between two and three years, seventy-six; between three and five years, thirty-four; between five and ten years, fourteen.

In a recent discussion on tuberculosis, (*Food*) Billings stated that "Tuberculosis undoubtedly caused more death in civilized countries than any other single disease, and a much larger number of deaths were due to it than appeared in the statistics. It has beed supposed by Cornet and others, that tuberculosis is not inherited—that if anything could be trans-

mitted it was simply a predisposition to the disease—but more recent investigations indicate that the bacillus of tubercle may be transmitted from the mother to the foetus. Many cases of death of children under one year of age given in the mortality statistics as due to marasmus, inanition, etc., and a certain number of cases of still-born were probably connected with the tubercle bacillus. In fifteen cities in France for which statistics were taken, Petit reports one-third of the cases for debility and marasmus as due, directly or indirectly, to tuberculosis."

According to Whittaker "the upper half of the alimentary track (mouth, throat, œsophagus, stomach, duodenum and jejunum) offers an unfavorable site for tuberculosis. The limp follicles of the ileum and large intestine are the organs usually affected when the disease has its origin in the alimentary tract." "Primary tuberculosis of the intestine occurs oftener in children than in adults." "The cause is due to the feeding of young children from the milk of tubercular cows."

The disease which in adult life most commonly manifests itself in lesions of the respiratory system, devastates infancy by attacking the lymphatic glands of the digestive system. Infant mortality from tuberculosis, is startling. Even if the doctrine of direct transmission from the mother to the fœtus *in utero* be accepted —and the proof of inherited tuberculosis is not conclusive—the course taken by the disease would indicate the alimentary canal as the most probable point of entrance for the infection, with the natural conclusion that the food furnished the means of conveyance.

Again, the common occurrance of tubercular disease in cattle, the extent of which is not accurately known but may be surmised from a study of the reports of Health Inspectors, would appear to confirm the impression that tuberculosis is a very real danger incurred by the use of milk as a food, especially for infants. That it is a possible danger, cannot be doubted; but whether the danger be great or slight, at present, is unknown.

In the effort to emphasize the actual existence of such conditions and the disastrous results which are liable to occur because of their existence, the enthusiast for preventive medicine and the specialist who makes his observations under the peculiar surroundings of the laboratory, are apt to exaggerate the importance of the particular subject by obscuring modifying circumstances. The result on the people at large, is like that of incessantly crying, Wolf! When in every day experience they fail to see the animal materialize, they become indifferent to the warning until disaster is upon them. So that while we would abandon no measure of preventive medicine that promises to accomplish something, we believe that the medical profession should not endeavor to arouse popular alarm but, on the other hand, should seek to allay it by using rational measures for educating the people; and reason requires that due weight be given to matters of practical experience and every-day observation.

For instance, there is scarcely room to doubt that milk which contains the specific germs of typhoid fever, scarletina, cholera or diphtheria, has been contaminated from sources of the animal furnishing the milk, and that such contamination could be avoided by the exercise of ordinary care on the part of the owners. Indeed infection could take place only through criminal neglect or equally criminal ignorance.

Tuberculosis, however, exists in cattle in the same form in which the disease occurs in man, and the milk cow may be extensively diseased and yet continue to furnish milk. It seems probable that milk from tuberculous cattle will not contain bacteria unless tubercular foci exist

in the udder. Even when milk contains bacteria, tuberculosis it is not the inevitable result. The germ does not multiply in milk, though it may remain alive for some time. Experiments have shown that a number of these germs must enter the body at one time in order to cause the disease. When present in the alimentary canal and in sufficient number, infection cannot take place so long as the mucous membrane of the digestive tract is in a healthy condition. And when it has entered the system, the micro-organism has to survive the conflict with the phagocytes.

The case is different where the milk contains the poisonous ptomaines which cause cholera infantum and other intestinal disturbances.

The dangers which lurk in milk are no greater now, that they are recognized, and their results measured, than they were when their existence was not even suspected. The responsibility for their continued existence is in direct proportion to the knowledge we have concerning them.

BOSTON MEDICAL LIBRARY ASS'N MAY 11 1899

ABSTRACTS.

LIGATION OF THE BASE OF THE BROAD LIGAMENTS PER VAGINAM, INCLUDING THE UTERINE ARTERIES FOR FIBROIDS OF THE UTERUS.

Dr. Augustin H. Gœlet, of New York, in a contribution to the *American Medico-Surgical Bulletin*, June 1, reports favorably upon this operation in his hands for the control of uterine hemorrhage and reduction of fibroid growths. He believes it should be done in lieu of hysterectomy when that operation would involve too great a risk, and as a preliminary step with a view of avoiding the necessity of the more hazardous operation. When extensive attachments have not been formed which would afford additional nutrition, considerable reduction has resulted even in growths of large size. When the operation has been done for smaller growths the result has been more satisfactory. In some instances complete atrophy has been reported. This result, as well as arrest of the uterine hemorrhage, is accounted for by the diminished nutrition furnished the uterus and these growths by interference with the blood supply and nerve supply, which are included by ligation of the base of the broad ligaments. It is estimated that the uterine arteries furnish the uterus with two-thirds of its blood supply, and it is reasonable to expect that a profound effect will be produced upon that organ, and growths arising from the walls, if this is suddenly cut off.

The sole danger in the operation is the risk of including the ureters in the ligatures, as they pass down behind the uterine arteries only a half an inch from the cervix and are consequently in the field of operation. Dr. Gœlet suggests, as a preliminary step, to eliminate this risk, that bougies be passed into the ureters through the bladder. He admits, however, that a careful operator, accustomed to working in this region, may easily avoid the ureters.

The technique of the operation as described by Dr. Gœlet shows an important departure from the usual method followed. Instead of ligating each artery in only one place on a level with the internal os, he applies a second and often a third ligature to the artery on each side as it ascends along the side of the uterus, the result of which is to cut off the compensating blood supply from ovarian artery to the lower part of the uterus.

Dr. Gœlet gives all the credit of priority to Dr. Martin, of Chicago, who has recently suggested and popularized the operation and perfected its technique but states that he first ligated the uterine artery *per vaginam* on one side in January, 1889, in the case of a large fibroid the size of a seven months' pregnancy with a view of diminishing the size of the growth by reducing the blood supply. The artery on the other side was not ligated because the position of the tumor made it inaccessable. Six months later the tumor was one-third smaller, and was giving no inconvenience.

He quoted his last case operated upon to show how promptly uterine hemorrhage may be controlled by this operation.

SOCIETY REPORTS.

LOUISVILLE CLINICAL SOCIETY.

February 27, 1894.

[STENOGRAPHICALLY REPORTED BY C. C. MAPES.]

FIBROID TUMOR OF THE UTERUS.

Dr. L. S. McMURTRY: This specimen is a fibroid tumor of the uterus of rather unusual conformations. The growth weighed immediately after removal about six pounds. A great deal of pain was produced by its pressure upon the rectum, bladder and uterine appendages. The last tumor of this kind that I presented to the society, the Fellows will recall had no conformation favorable to the formation of a pedicle and I had to do a complete enucleation. In this case I succeeded in making a pedicle of the cervix and treated it extra-peritoneally with the *neude*. Both cases did so well that it is hard to say which method is preferable. This patient had no shock; did not lose over two ounces of blood in the operation, and her pulse never went higher than 90 after the operation. The *neude* came away to-day (the eleventh day after the operation) leaving a small granulating surface—a completely mummified button—healing by primary union.

DISCUSSION.

DR. W. O. ROBERTS: I would like to ask Dr. McMurtry which method of treating the pedicle he prefers in cases of this kind, and whether he uses the rubber cord?

DR. L. S. McMURTRY: I believe the extra-peritoneal method the safer. The great danger in the operation is from hemorrhage, and I believe this is reduced to a minimum by the extra-peritoneal method. I did not use a rubber ligature in this case.

DR. T. P. SATTERWHITE: Was not the tension on the pedicle very great?

DR. L. S. McMURTRY: The tension was very slight, and it can always be relieved by letting down the broad ligaments on each side.

PYO- AND HYDROSALPINX REMOVED FROM THE SAME PATIENT.

DR. W. H. WATHEN: I had intended to exhibit this evening quite a number of pus tubes recently removed, so as to compare them as to size, conditions, etc., but I had no time this afternoon to collect them; so I will only exhibit two tubes removed at three o'clock to-day. You will observe the larger specimen is a pus tube which was adherent in every part of its surface. It was removed from the left side. The other removed from the right side is a typical specimen of hydrosalpinx. More typical specimens of pyosalpinx and hydrosalpinx could not be found.

The patient was twenty-four years of age, married seven years ago. She was always well until six months after marriage. She then began suffering pain in the region of the pelvis and having profuse menstruation. From that time until now she has progressively grown worse, menstruation becoming more painful and lasting longer, sometimes continuing for three weeks. Her husband contracted gonorrhœa before marriage and the history of the case indicates that he infected his wife shortly after marriage. She had chronic endometritis; the uterus was greatly enlarged and the leucorrhœal discharge was profuse and offensive. Believing that many of the bad results or failures to make perfect cures in these cases is because the operation is not sufficiently thorough, and that septic matters and diseased structures are left that ought to be removed, immediately before removing the tubes, I dilated the uterus and thoroughly curetted it, irrigated the cavity with 1 to 4,000 bichloride solution, and tamponed the cavity and vagina with iodoform gauze. This hydrosalpinx had evidently been emptying itself into the uterus, because two months ago I examined the patient, and on the right side there was an enlargement considerably greater than at the time of the operation, and when the tube was ligated and removed close at the uterus, a considerable amount of the contents leaked out. The pus tube was patulous to the uterus and I cleansed the cavity of the tube left in the stump, and put

carbolic acid in it; then stitched over the peritoneal surface so as to close the cavity. There was nothing unusual in the operation, the woman is practically in a normal condition and will get well.

DISCUSSION

DR. J. W. IRWIN: I would like to know the relation between the attack of gonorrhœa which occurred seven or eight years before, and the hydrosalpinx. I can hardly see how there might be disease produced by the gonorrhœa to cause pus in the other tube, but why one should take on pus and the other water, is something I would like to have explained.

DR. I. N. BLOOM: I would like to inquire when gonorrhœa was acquired by the woman and how long after that the pyosalpinx developed; also how long before marriage had all gonorrhœal signs ceased in the husband, or had all gonorrhœal signs ceased before marriage. I ask these questions because it is pertinent to the subject discussed at the last meeting of the Surgical Society.

DR. W. H. WATHEN: I do not know how long symptoms of gonorrhœa had been absent in the husband before marriage, but he says that she complained of difficulty in passing urine and had a discharge such as is characteristic of gonorrhœa. I do not know positively that the case is gonorrhœal in origin, though the presumption is that gonorrhœa caused the trouble. A hydrosalpinx is usually a chronic stage of a pyosalpinx, the pus having become sterile and clarified.

DR. I. N. BLOOM: As I have already intimated this subject was discussed before the Surgical Society at its last meeting, and I will give a resume of two rather unusual cases that I reported. One was a man, married, who while on a spree had connection with a prostitute. Four or five days afterwards he sobered up and had coitus with his wife. A day or two after that he noticed a slight discharge from his penis and consulted me. The flow was mucoid, hardly muco-purulent in character, and ceased altogether in four or five days under ordinary treatment. Urination on part of the patient was painless, and there was little or no inflammation around the meatus. He had no intercourse with his wife after first consulting me, and she subsequently developed undoubted gonorrhœa which lasted four or five weeks, which was characterized by the usual symptoms, urethritis, vaginitis and pelvic peritonitis. Previous to the time this man first consulted me he had had no signs of gonorrhœa for ten years.

Another case was the following: A gentleman three years ago had chronic gonorrhœa. The discharge came on at intervals; sometimes it would disappear for a week or two, then become varied in form from a thin, gleety mucous discharge to an occasional purulent flow. Under stimulation by excess in venery, drinking, etc., it would become purulent in character. He also had a syphilitic affection of two or three years standing to the treatment of which he devoted most of his attention, giving himself very little concern about the urethral discharge. Finally he decided to get married, and in July consulted me as to the advisability of this procedure. I told him that so far as syphilis was concerned there was no reason why he should not marry, but so long as there was the slightest discharge from the urethra this feature would debar his union. Proper treatment of this condition was then instituted, and in August I had the flow practically under control, still at times when he had not urinated for three or four hours there was some urethral discharge. The subject of marriage was a serious one, and I took a sample of the secretion to my friend, Dr. Vissman, who made a microscopical examination with the following report—that gonococci were present very few in number, and while perhaps the man could not infect his wife, the possibility was there, and advised against immediate marriage. This was the middle of August; meantime under vigorous treatment by the end of the month all signs of the discharge ceased. The first and last urine throughout September was utterly and absolutely free from any gonorrhœal shreds or threads, and there was no symptoms at all. Early in October about six weeks having passed without a sign of gonorrhœa, I gave it as my opinion that there was very little danger from his marrying. He married, and has never had the slightest discharge from the urethra from that day to this. October, November and a part of December passed. About the middle of December his wife developed a typical case of gonorrhœa with urethritis, vaginitis and pelvic peritonitis involving the left side, having the peculiar pains running down the leg.

The question I brought up to the Surgical Society was a double one: If we admit the specificity of the gonococcus as the causative agent of gonorrhœa, as most authorities have done, and if we admit that the first case I reported had specific gonorrhœa, then we must agree that it was cured in four or five days. If he did not have specific gonorrhœa, how could he have infected his wife with gonorrhœa? If we admit that he did have specific gonorrhœa, and was cured in four or five days, then we must admit something that it is not generally accepted though such things may occur.

In the second case, the grave question was, here is a man who for two months has absolutely no signs of gonorrhœa. Several months before he had such slight signs that I believe physicians as a rule would have permitted him to get married. Yet after having been absolutely free from all symptoms for over two months, married and his wife subsequently developed an undoubted case of gonorrhœa. A distinguished surgeon in discussing the subject recently stated that certain lesions remained for a long time, certainly for a year or more, after apparent recovery from gonorrhœa. The question then comes up when can a man having had gonorrhœa and thinking he is cured, all symptoms being gone, no microscopical signs present—when can such a man marry without danger of infecting his wife? We certainly cannot expect to keep our patients from marrying for a year after the discharge has ceased and after all symptoms have subsided. We cannot say that it is not safe for him to marry for a year. It is a very grave question, especially since a woman once having gotten gonorrhœa is liable to suffer from late forms such as pyosalpinx, hydrosalpinx, etc., etc., as brought out in the case reported to-night. It is a question that ought to be discussed, and I hope some light may be thrown upon it by subsequent speakers.

Dr. L. S. McMurtry: The question Dr. Bloom has presented of course is hardly in line with the discussion of the pathological specimens exhibited yet it brings up a subject that is very extensive. As he has indicated it is certainly a vital question. It has only been in recent years that gonorrhœa in the female has been considered a disease worth paying any particular attention to. It has been only since microscopical researches have demonstrated the characteristic pathogenic germ of Neisser that the fact has been known that latent gonorrhœa in the male can communicate specific disease to the female, and the whole subject as to the time a man can marry after having had gonorrhœa without danger of infecting his wife, etc., is something to be determined by the profession upon recent observations just in line with what is being discussed. I think as yet professional opinion is in a very unsettled state in regard to it. There is no doubt that every man who sees a great deal of the diseases of women will find a large number of young women, who, as soon as they are married, begin to have a very suspicious catarrhal endometritis, oftentimes followed by all the indications of diseased appendages. I have in mind now one case, a young lady who has pelvic inflammation, the appendages fastened down by adhesions, from gonorrhœa contracted during the honeymoon. I know that the husband in this case solicited medical advice as to whether he was in a condition to marry. I do not believe the profession is sufficiently careful in giving advice on this subject; they allow men to run too great risk of inflicting this disease upon their wives. The number of cases of disease of the uterine appendages is very much larger in cities than in the country where people lead a simple rural life; where there is not so much gonorrhœa there are fewer cases of disease of the appendages. There is no question but gonorrhœa is one of the most prolific causes of pyosalpinx. Of course there are a great many cases of pyosalpinx of other origin such as puerperal infection, etc., but gonorrhœa is certainly a very prolific cause. I believe this whole subject should be given more attention by the profession, and some definite and authentic rules formulated concerning the dangers of marriage too early after incomplete cure of gonorrhœa.

In regard to the case described by Dr. Bloom: It is certainly a peculiar one, but it seems to me there is one point that is very clear in the examination made by Dr. Vissman, if any gonococci were found that would have been sufficient evidence that the man was not in condition to marry.

Dr. J. M. Matthews: How do the gynecologists conclude that gonorrhœa of

the gonococcus is the cause of pyosalpinx, etc.

Dr. L. S. McMurtry: That can be demonstrated both by microscopical researches upon the subject and by the clinical facts, just as much by the clinical history as by the microscopical examination. The clinical facts bear out microscopical researches upon the subject almost invariably.

Dr. J. M. Matthews: I want to know why these gentlemen suppose that so many cases of pyosalpinx, etc., result from gonorrhœal infection. I would deny as a surgeon and as a physician that the clinical history or clinical facts would establish it at all. I want to know what is the microscopical investigation upon which they base their opinions.

Dr. L. S. McMurtry: It is the same infection in substance microscopically demonstrated that occurs in relation to the bacillus tuberculosis. Of course there are those who question whether the bacillus tuberculosis is the agent which begets that disease, or is the product of that disease. The same reasoning I think is applicable in the question Dr. Matthews has raised, as to whether the gonococcus is the cause of pyosalpinx as applies in the case of the bacillus tuberculosis being the cause of consumption. I think the two are parallel.

Dr. J. M. Matthews: What I wish to know is this—whether a woman having simply had gonorrhœa and subsequently develops pyosalpinx. Are you willing to say the gonorrhœa is the cause of that condition, or do you rely upon microscopical examination to prove it?

Dr. L. S. McMurtry: Pyosalpinx can be produced by other causes than gonorrhœa but certainly gonorrhœa is one cause, and I will reiterate that the clinical facts will bear it out. I will recite a clinical case: A young man about town has gonorrhœa, is treated by his physician for gonorrhœa; while still having a gleet he marries. Within ten days his wife is in bed with a very ugly leucorrhœa, with tenderness about the uterine appendages. Within six weeks she has fixation of the uterus and the appendages. with what we formerly called pelvic cellulitis which we now denominate pelvic peritonitis;—there are the clinical facts. I will report another case: A woman with the same symptoms and the same condition of the pelvic organs. The family physician says to the specialist that he is treating such a patient presenting certain conditions, and asks what he thinks about the cause. The specialist replies that it may be due to several causes, and inquires as to the probability of gonorrhœal affection. By comparing notes it is developed that the woman's husband at the time is under the specialist's care being treated for gonorrhœa. This is the clinical data which I claim will justify reasoning that gonorrhœa is one cause of pyosalpinx.

Dr. J. W. Irwin: In general practice we often meet with cases such as referred to by Dr McMurtry, and we do not think of calling in a specialist. In going back over a series of years I do not know how many cases such as Dr. McMurtry has described have come under my own observation. They were called then pelvic cellulitis and various other names; I can recall several instances where young men married within a few weeks after the cessation of a gonorrhœal discharge and nothing was ever heard of it; their wives were not affected by the disease; they went on and bore children. I can recall other cases where men who were suffering from gleet, (chronic gonorrhœa) married and they did not infect their wives. And I recall some cases where the husband never had had gonorrhœa, and where the wife had what was called pelvic cellulitis coming on five or six weeks after marriage, in fact where the disease occurred in a severe form it always came on within a comparatively short time after marriage. I believe that gonorrhœal infection may be the occasional cause of pyosalpinx, etc., but I do not think it is at all established as the chief cause, it is the exception and not the rule. The only way the gonorrhœal infection as a cause could be established would be to have the gynecologists—say for one year—to submit all of the pus tubes removed to a microscopist for examination; if the gonococci were found in the tubes, it would be reasonable proof that gonorrhœa had at least a great deal to do with causing pyosalpinx. If the gonococci were absent in the tubes then I should say that the condition was not due to gonorrhœa. I do not know of a better way to reach some definite conclusion. I would suggest that something of this kind be done if it has not already been thought of. I know of many women who have had so-called pelvic cellulitis, peritonitis,

etc., and after suffering a few weeks have gotten well of the disease and subsequently borne children. If their tubes had been infected with gonorrhœa, it is not so reasonable to suppose that these women would have borne children although gonorrhœa does not always cause sterility. It would be well if possible to know just what it is that brings on these conditions of pyosalpinx, etc. My own observation is that a few of the cases may be due to gonorrhœal infection while the great majority are the result of catarrhal causes, septic infection and traumatism.

DR. W. H. WATHEN: In answer to Dr. Irwin's inquiry as to the date of origin of the hydrosalpinx, I would say that it is impossible for anyone to tell, unless the case had been under constant observation. I never saw the woman until two months ago, and the hydrosalpinx was then present. But it has been shown that a hydrosalpinx may be a very chronic affair, and is often a chronic state of pyosalpinx. This is in accordance with the latest pathological investigations. A pus tube may be of very recent origin. There is too little attention given to the inquiries of patients with gonorrhœa as to when they may marry. It is not a question of how long after having had gonorrhœa that a man may marry without endangering the woman to infection, but it is a question of his condition at that time. A man may have gonorrhœa and within two weeks after the discharge had ceased in the acute form, he may marry and never have a recurrence of the trouble and not be able to infect any one, because all the pathogenic germs are destroyed. Again he may be apparently cured of the gonorrhœa, having noticed for a year, or two years if you please, no discharge, but excessive sexual congress usual in married life brings about a constant irritation of the mucous membrane of the urethra in which there are some latent gonorrhœa which multiply and become as virulent as in an acute attack. If these cases were examined into carefully, it would be found that some part of the uretha had not been cured. There would be found a latent gonorrhœa, usually a stricture.

So that instead of the time it should be the condition which should be carefully examined into before any opinion is given as to the advisability of marriage. There is positive evidence that gonorrhœa has produced, and does often produce pyosalpinx. I think we can come to a positive conclusion from the clinical history. Many cases have come under my observation where from the clinical history I was as positive that the pyosalpinx was the result of gonorrhœa, as I ever have been that a patient had gonorrhœa from an examination of the case. The diplococcus of Neisser does not penetrate so deeply into the tissues as does the streptococcus or staphylococcus, and it is more sensitive than either of these, and is often destroyed by contact with other bacteria, or the resisting powers of the system; and for these reasons in pyosalpinx of positive gonorrhœal origin, we often cannot find the gonococcus in a large pus tube by subjecting the pus to a thorough bacteriological examination; in fact in some of these large pus tubes there is no form of pathogenic bacteria. They seem to have by some means become destroyed. But if we will examine into these cases bacteriologically we will find colonies of gonococci in the early stages of gonorrhœal pyosalpinx, but we will not find them if the case is permitted to go on until it becomes old and chronic. We do not know in removing these tubes whether the pus is virulent or not, and just here comes in an important point that ought not to be lost sight of; namely: That every pus tube should be considered virulent for the reason that we cannot from the physical appearance come to any correct conclusion about the degree of virulence. We may have small pus tubes that look simple and harmless, yet they may be swarming with pathogenic bacteria; while large tubes with pus offensive and black may be sterile. The Johns-Hopkins University has done valuable work in this particular by examining specimens as soon as removed. On one side has been found a large pus tube but no bacteria; upon the other side a small pus tube containing only a few drops of pus, with numerous colonies of pathogenic germs.

By some accident one pus tube or pus sac is ruptured in attempts to enucleate it, the intestines and peritoneum are soiled, and the patient makes an uninterrupted recovery. The old idea was that this was entirely due to the resisting powers of the patient. While it may be true that the resisting powers of one patient against infection are greater than another, the in-

fection or exemption from infection, may usually be explained because of the presence or absence of pathogenic germs in the pus or on anything used in an operation. So, as it is impossible from the physical appearance to determine if the germs are pathogenic, we should always if possible, protect the peritoneum from being soiled, and if it is soiled we should in every case cleanse it thoroughly.

Dr. J. M. Mathews read a paper entitled

RECTAL ABSCESS.

(See page 8 REPORTER of July 7th.)

DISCUSSION.

DR. J. W. IRWIN: I rise more particularly to express my commendation of the most excellent paper read by Dr. Mathews. This is certainly a live subject and one of the greatest importance, because nearly every physician meets with such cases. The description given by the essayist is very accurate and to the point.

There is one point in regard to rectal abscess that he did not emphasize, *i. e.* the use of poultices. He mentioned that poultices should not be used after incising rectal abscess; I think we should go further than this, and say that poultices should never be used in the treatment of this condition, either before or after evacuating the abscess.

Dr. W. O. ROBERTS: I think most surgeons of the present day will agree in the main with what Dr. Mathews says in his paper. There is no question but that most of the bad results in cases of ischio-rectal abscess are due to bad treatment. By *bad treatment* I mean just exactly what Dr. Mathews has stated—either allowing the abscess to break, or making an insufficient opening for drainage. I believe that in ischio-rectal abscesses the pus forms within forty-eight or seventy-two hours after the first symptoms develop, and frequently there is a large collection of pus in the cavity when no fluctuation can be discovered by examination from the outside. Like Dr. Mathews, I do not wait for fluctuation to be present before opening the abscess. I also make a large opening, one which will admit with perfect ease the introduction of my finger, and after evacuating the abscess I carry my finger into the cavity to divide any partitions that may be present. I think by this method we will certainly confine the fistula which follows to one tract. The cause of so many fistulæ I believe to be due to the fact that the opening is too small for evacuation of the pus.

My treatment of such cases is about like that advised by Dr. Mathews—a free incision, washing out with mercurial solution, (I prefer that to peroxide of hydrogen,) packing the cavity lightly with iodoform gauze, then applying over the region of the abscess an *abundance* of gauze and over that cotton. I do not think cotton amounts to anything in these cases except as a protection to the gauze. I change the dressing daily until inflammation has subsided, continuing to use iodoform gauze. After inflammation has subsided and the cavity has contracted, I cease using the gauze and employ in its stead a piece of rubber tissue, simply to keep the external wound open until healing takes place behind. I think in the great majority of these cases there is an internal opening, and where this exists I do not believe it will heal until after an operation for the fistula has been performed. Sometimes we have a recurrence of the abscess after a lapse of months, and in these cases recurrence frequently takes place without any apparent cause, such as injury, exposure to cold, etc. I have a case under observation now in which abscess developed a year ago last September. A gentleman otherwise in good health commenced feeling very sore and uncomfortable about the region of the anus, left here to visit his wife who was spending the summer at a seaside resort. Reaching his destination he had a fever, and considerable tenderness about the anal region. He consulted one of the leading surgeons of the East who happened to be at the summer resort at that time, and to my very great surprise exactly the treatment spoken of by Dr. Mathews was carried out, that is poultices, etc., which was kept up for several days; then after the man had had a few chills and sweats, the abscess was opened not by a very large opening, and the man was in a very critical condition for some days. He returned to Louisville about two weeks after the first operation was performed, and I found a considerable boggy condition about the buttocks, the opening being so small that the abscess did not drain thoroughly. I made a free

cut, large enough to introduce my two fingers, and by treating as I have described the abscess cavity gradually closed. I think it was fully a month after he returned before the wound entirely healed and he was considered well. He had no further trouble until two weeks ago when he commenced complaining of soreness about the same region; I saw him in forty-eight hours after the first symptoms developed; there was a boggy condition about the region of the old cicatrix, but no fluctuation. I was satisfied pus existed from the local evidences of inflammation and general fever that he had, so I immediately made a free incision and quite a large quantity of pus escaped. Instead of having an increase of fever following the operation as he did in the first instance, it subsided immediately; he has gone along without an untoward symptom, the abscess cavity has now contracted to a very small fistulous tract and while I have been unable as yet to discover any internal opening, I still believe one exists. My experience with these internal openings is that they are nearly *always* situated just within the anus. I have never met with a case in which the opening was as high up in the bowel as described by Dr. Mathews, though of course they may exist, and have been frequently reported. I do not believe it is a good thing to keep gauze in the abscess after it has contracted down to a very narrow fistulous tract.

DR. J. W. IRWIN: What per cent of the cases bear out the suggestion of Sir Benjamin Brodie, that all such disorders (fistula in ano) are due to a tuberculous diathesis?

DR. W. O. ROBERTS: While we do meet with a great many cases of ischio-rectal abscess resulting from tuberculosis, I think we meet with fully as many due to other causes.

DR. T. P. SATTERWHITE: I believe that a large per cent. of rectal abscesses are due to microscopical openings in the bowel, the juices of the bowel permeating into the cellular tissue causing ulceration. There is one point in connection with Dr. Mathews' paper that I would like him to explain: He said in case of the young lady there was one opening which it became necessary to close, and it had to be very carefully done in order to preserve the sphincter muscle; did he operate upon both sides at once?

DR. J. M. KRIM: This brings up the question as to whether it is advisable to operate upon these cases when there is a tuberculous diathesis. I have seen a few cases of rectal abscess, and remember one Dr. Mathews operated upon who had tubercular trouble, still it gave him immediate relief. However, the patient finally succumbed to tuberculosis.

DR. J. M. MATHEWS: In closing the discussion: To begin with I am very glad that Dr. Irwin sanctions the advice not to use poultices, especially after an opening is made. We all know that poultices in surgery have been relegated to a non-existence. I am glad to know, also, that Dr. Roberts, the eminent surgeon that he is, agrees with me in the main, especially in the treatment of rectal abscesses, as a surgeon he has seen so many of these cases of fistula that have, as stated in my paper, become invalid for life; men and women who are not able to pursue the ordinary avocations of life, the vast majority if not every one due to the bad management of the original abscess by the physician. I cannot agree with Dr. Roberts in one proposition—that the majority of fistulæ in ano, especially those he describes originating in the ischio-rectal fossæ, have an internal opening into the bowel. Such abscesses usully originate from trauma from some outside causes, and that is the very point I tried to make explicit in my paper—that if we could reach the abscess and evacuate it before its ravages were advanced to the point of perforation of the bowel, that we would avoid not only an internal fistula, but any fistula at all. I know that I have operated upon scores of cases of fistulæ that never had an internal opening, that I never penetrated the bowel at all, I have gone into both buttocks and into the fossæ, made large wounds dividing these different cavities such as he speaks of, &c., and cured my patient without ever going into the bowel. Indeed admitting that there might be an internal opening, I believe by such surgery as I have indicated, going down and making a free division using the peroxide solution, or Sol. Bi. Chlor. Hydgr. the inflammatory deposit will be sufficient to close it, if the operation is done in the early stage before any especial pathological changes have taken place.

Dr. Satterwhite states that he believes the majority of fistulæ begin as an ulceration in the rectum which extends into the fossæ or strubture outside. I cannot hold

to that belief, nor do I believe that a heavy percentage of fistulæ have an internal opening at all. It is not necessary for me to state my views about the operation for fistula and the finding of an internal opening; the majority of books say it should be sought for and found before you do an operation. I have differed from these distinguished authorities by saying that when I do an operation I will find the internal opening, that I will never seek for it at all before operating, but in the majority of cases it does not exist.

Dr. Krim asks concerning the propriety of operating upon tuberculous patients who have fistulæ. I wish to say this: That considering the latter day views of this subject, we are constrained to believe that a man may have tuberculous tissue in one portion of the body and not in another. A man may have a tuberculous joint, and yet not have phthitis; he may have tuberculous rectum and yet not have consumption of the lung. Therefore if there is any one thing which is taught plainly to-day in regard to tuberculosis, it is that just so soon as you detect it, that tissue must be removed, because from a small local spot general infection may take place. A man might have a tuberculous condition of a joint, and from that he could have general infection, or phthisis. If a man has a tuberculous ulcer in the rectum, it is the duty of the surgeon as soon as he detects it to curette or cut the whole thing out; therefore in answer to Dr. Krim's question I will say that they demand an operation much quicker than ordinary cases of fistula, much more than ordinary cases of ulceration of the bowel. The moment you decide it is tuberculous you must curette or by other means get rid of that tissue to save the patient from general infection. Now, as Dr. Krim states, here is a case that takes us back to the old doctrine of Brodie spoken of by Dr. Irwin: If a man happens to have consumption (or phthisis) if you please, and should develop fistula, they said it was because he had consumption and therefore they let him go on suffersng the agonizing pain of fistula in ano because they regarded it as an escape or an outlet for this condition of the lung. The case Dr. Krim refers to clearly disproves the old doctrine—we take a man who is suffering from a tuberculous abscess or fistula and we entirely cure him; he gets rid of the rectal trouble, but has general tuberculosis at the time that we operate; he is relieved of the local trouble but after a while dies, because he has consumption. Now the older authorities say that this man died because we did the operation, because we cured the fistula. Therefore I believe if for nothing else, you relieve a man from the local distress he is suffering, and he should be operated upon; certainly if the man has a tuberculous ulcer, fistula, etc., it should be operated on at once and no half measures will do. The same as you would remove a cancerous growth you must remove the tuberculous tissue.

Referring further to the remarks made by Dr. Satterwhite: This young lady as you will understand had both buttocks undermined, they were not little channels, little sinuses, you could run your fingers out into each buttock, there were numerous cavities with bridges across, etc. Her sphincter muscle being the objective point I wanted to preserve it in order to prevent this woman having incontinence of feces. I operated on only one side at a time. I say I had to divide her sphincter muscle on one side; this became necessary owing to the extent of the fistulous tracts. The pathological condition was two years old, consequently I divided the muscle freely on one side, followed up the different sinuses, channels and cavities, allowing the patient to rest three weeks then operated on the other side, opening and curetting freely, but did not go into the bowel. I did not cut into the bowel because I did not find an internal opening; even had there been one I am persuaded that the inflammatory deposits excited by the incision would have been sufficient to close the opening. The one important point was to preserve the sphincter muscle so as not to put this woman in a condition of incontinence of feces. By simply the division of one side, I know she will not have incontinence.

MASTURBATION IN A CHILD (FEMALE) ÆT. 20 MONTHS.

DR. P. F. BARBOUR: A child was brought to see me last summer with the diagnosis of chorea or epilepsy by the family physician. The mother said that the little girl twenty months old had fits. She could not give me a very accruate description of the spells, but the child had one

while at my office so I had the opportunity of seeing just the nature of the attack. She would throw her head back, throw her hands down to her side and become perfectly rigid; eyes wide open and legs extended. She had several such attacks in succescion. I diagnosed the case as masturbation. Upon examination I found that the clitoris was slightly adherent and in a state of irritation. I could not find any irritation about the bowel, pin worms or anything of that kind. The child was put upon bromid of potassium in small doses and improved very rapidly. I lost sight of the case afterward and do not know whether the cure was permanent or not. This is the youngest case of masturbation I have seen.

DISCUSSION.

DR. W. H. WATHEN: How did you come to the conclusion that it was a case of masturbation.

DR. P. F. BARBOUR: I was led to suspect masturbation from the cunning manner and expression of the child. I watched her very closely. The spell was not like epilepsy, chorea or any other form of convulsion. The diagnosis was proven by pressing upon the irritated clitoris when she would have a spell which was a perfect illustration of an orgasm.

MULTILOCULAR CYST OF RIGHT OVARY.

DR. W. O. ROBERTS: Three weeks ago I was called to a distance to see a case of abdominal tumor. The history as furnished by the physician in charge was about as follows: The patient was a lady forty-three years of age, the mother of four children, youngest six years old. Last June she had a menstrual period which was rather more profuse than usual. Since then she had menstruated at irregular intervals and each period was more acant than normal. Early in December she was seen by a physician who told her that she was the subject of an abdominal tumor; the first of January she was seen by another physician who pronounced her pregnant, and a week before I saw the patient he said she had very marked pains resembling labor pains. No membrane had been expelled, but she had suffered with periodical pains, and the doctor thought he detected movement about the abdomen, and said the patient herself and her husband also thought there was some movement. The abdomen rapidly increased in size, and she was tapped by the physician in charge and about a gallon of reddish colored fluid withdrawn, which, however, under the microscopic he said showed no blood cells.

A week afterward the abdomen had refilled and she was again tapped. Four days before I saw her she had been quite flightly; she had some elevation of temperature each day, but the pulse was 88 and of good volume. She was quite anæmic, the abdomen was very large and on examination I made out what I took to be a mulitiocular ovarian tumor. She was irritable, whining a great deal, and seemed to be suffering considerably. I advised a laparotomy and suggested that she be brought to this city. This was on Wednesday. She was brought to the city Thursday and on arrival her temperature was 102 F. The next morning (Friday) it was 101 F., Friday night 100 F., Saturday morning it was still 100 F., pulse 100, and she was still flighty. I did a laparotomy and found an enormous muitiloculas cyst of the right ovary, one of the cysts, the one that had been tapped, was ffiled with black, broken down tissue. The only adhesions were those in the regions where the tapping was done. She rallied from the operation without any trouble, and never afterward developed any abdominal symptoms or any symptoms referable to the operation. But complete aphasia came on the day following the operation. At the end of a week she became paralyzed on the right side and she finally died ten days after the operation in a condition of coma. There was no abdominal distension and no symptom referable to the operation.

Protozoa and Carcinoma.

I. Adler, after critical survey of the literature that has accumulated during the last few years on protozoa and their relations to malignant tumors, concludes as follows: "The existence of parasitic protozoa in cancer is probable, though the greater part of what has hitherto been described as parasitic is certianly not so. No constant nor in any way specific organism has as yet been demonstrated beyond possibilities of a doubt. At present no facts, histological or otherwise, compel the assumption of a parasitic origin of carcinoma, while there are very strong and valid arguments against such assumption."

CURRENT LITERATURE REVIEWED.

IN CHARGE OF ELLISTON J. MORRIS, M. D., AND SAMUEL M. WILSON, M. D.

THE JOURNAL OF CUTANEOUS AND GENITO-URINARY DISEASES

for June, Dr. Henry W. Morton describes three cases of

Raynauds Disease.

This name has been given to a disorder which Raynaud first described in 1862, and called "Local Asphyxia and Symmetrical Gangrene of the Extremities."

In this disorder the extremities appear bluish and then almost black without known cause, and then often perhaps some hours resume their natural color. Ears, nose, fingers, and feet may all be affected unequally. During severe attacks there was indistinctness of vision, and examination showed contractions taking place in the arterioles of the fundus and after awhile forming in another part of the vessel. The uncontracted part was fully dilated, and pulsation in the veins was easily seen. During intervals of the cyanosis the dilatation and pulsation remained. The right eye was less affected than the left and the thumbs were not affected. The color, in the left hand especially, never becomes normal.

By cutting the cervical sympathetic, and electrically stimulating the distal end Raynaud observed the usual vaso-contraction and thought, therefore, that vaso-motor nerve excitement might be the cause of the disorder.

It is probable that all the arteries are contracted in this disorder, but that we notice this only in those whose normal calibre is so small that any lessening of it practically closes them. When owing to syphilis or contracted kidney there is a fibrous thickening of the walls, we can easily see how a vessel, normally so large as to show very little obstruction by contracting, may become almost occluded by slight vasomotor spasm. The question has arisen whether many cases reported to be Raynaud's disease, were not cases of obliteration from organic vascular disease.

Owing to retarded circulation the nutrition of the extremities is interfered with, the finger tips become flattened, the epithelium scales off, the nails become dry and brittle and may split. The color of the finger tips may be white and exposure to cold may increase it. In other cases the bluish color extends to the lips. Pain may or may not be present.

The disease progresses slowly until the arterioles are occluded, and then gangrene, limited to the soft parts, appears. A line of demarcation forms, and the necrosis may involve the hand, or remain limited to a finger tip.

Two cases are given in one of which there was vaso-motor spasm simply. A farmer, forty years old, complained that the terminal phalanges of his hands would become white and continue for hours. This increased so that the condition remained all winter, and finally in summer also. Exacerbation occurred in which the affected parts became almost black. Finally half of the soft parts of the second terminal of the left hand became gangrenous and sloughed off. No explanatory history.

To lessen the excito-motor power Raynaud treated similar cases by the descending current, placing the positive pole on the seventh cervical vertebra and the negative in the lumbar region, and found it beneficial.

THE ARCHIVES OF PEDIATRICS

for June. Dr. J. Lewis Smith writes of

The Alimentation of Young Children.

He thinks ignorance, and neglect of proper care in feeding infants is a great cause of mortality among them.

Sometimes, even among the wealthy, and therefore well-fed, the breast milk is insufficient in quantity and the child is very fretful except when at the breast, then crying and sleepless, losing weight and strength, has scanty urine and stools. Of course this state of affairs is more common in the poor where the mother is insufficiently fed.

Over feeding, causing vomiting, intestinal catarrh and diarrhœa is another common evil to be avoided.

During the first few weeks the new born infant will be applied to the breast from every half hour to every two hours, but after the fourth or sixth week the author says it should be feed every two hours.

Fretfulness, instead of quite sleep, after nursing is a sign that the quantity or quality of the milk was deficient. Mothers who keep late hours and are fond of society may furnish milk apparently all that can be desired, and yet wholly unsuited to the infant. The author mentions a case where a healthy infant applied to the breast of a wet nurse returning from a night's debauch was suddenly seized with fatal convulsions. He thinks artificial food required at six months of age, that a baby should be weaned at ten or twelve months, provided this age does not occur in the hot summer months, and he states also that if an infant be nursed every two hours the milk obtained will be richer and greater in quantity than if four or six hours elapse.

Naming cow's milk as the best substitute for mother's milk for an infant the author mentions some of the objections to its use, prominent among which is the chances of infection from various disease germs getting in the milk after it is drawn from the cow, and of course, the possibility of the cow being unhealthy and perhaps not showing symptons of disease. (*To be continued.*)

Dr. J. W. Ballantyne's article on

Congenital Ichthyosis

is continued. (See Reporter April 28.)

Besides the grave form, there may be described a mild form of fœtal ichthyosis characterized by the presence at birth of a contin-

nous layer of a collodion like substance over the whole body and by a desquamation of this as small flakes like tissue paper. This may be accompanied by ectropion and eclabium, is not usually fatal, and often terminates in cure.

In the recorded cases a family prevalence was noted, and in twenty-six cases where the sex was noted sixteen were boys and ten girls.

In all cases the skin was abnormal at birth but this was only noticed in some cases after the removal of the vernix caseosa.

The coating varied in appearance from a whitish pellicle to that seen where tincture of iodine has been painted on. The lightly stretched waxy appearance is often dwelt on, After a varying length of time fissures appear, usually at first along the lines of the natural folds of the skin, desquamation begins, the exposed skins dries, and in turn desquamates, etc. In a few cases the epidermis becomes horny and resembles adult ichthyosis. As in the grave form, but to a less extent of course, the contracting skin may hold the mouth partly open, making nursing difficult, the nostrils may be choked, and the ears seem glued to the scalp. The eyelids are apt to become ectropic, and the limbs are apt to retain their foetal position.

In some cases the skin becomes normal in a few weeks, or perhaps without being cured, the case permanently improves, but usually the disorder continues through the life of the patient.

In a few sections of skin the microscope showed the affected skin to be only one half the normal thickness, the panniculus adiposus much reduced, and the epidermis thickened to constitute at least one quarter of the total thickness. Probably owing to absence of fat no black layer appeared after application of Flemming's solution. The sweat glands were well developed.

Its differential diagnosis from scleroderma depends on the latter not desquamating, and never appearing in the new-born; psoriasis has not been seen earlier than eight months of age, and is not general. Eczema squamosum is rare in infancy, and the history, distribution, etc., help to distinguish it. Congenital syphilis causes a moist, rather than a dry, desquamation, and other symptoms, and the history will assist in its recognition.

The treatment of ichthyosis has been very unsatisfactory. The chief indications are to support the system by food, nursing, etc., and to soften the epidermis. According to the indications which individual cases presented antimony, mercury, iodide of iron, and cod liver oil, have been used by different men, but internal medication has shown poor results. Inunctions with glycerine, and various fats and oils have appeared to do more good, and Piffard used with some success a solution of peroxide of hydrogen.

Dr. Jerome Walker writes of the

Diet of the Nursing Woman,

(a paper read before the section on pædiatrics in the New York Academy of Medicine.)

The author refers to the growing inability of American mothers to nurse their infants, even when eager to do so; he confesses his inability to account for it, but thinks one reason is the habit of using rich food when the milk appears to be poor. This procedure often increases a dyspepsia which is at the root of the trouble, and the nursling fares worse than before. Sometimes certain foods produce digestive disorders in the mother, sometimes only the child shows the effects, and in a third class neither mother ner child seems injured by anything taken.

The food that seems most generally to meet all requirements is cow's milk, easily digested. Digestion is sometimes assisted by warming the milk, mixing one fifth or one sixth of its bulk of lime water with it, or, especially at night, adding a teaspoonful or two of essence of ginger. A general mixed diet is necessary usually, and to assist in its ready digestion it is well to use one of the malt extracts. The use of malt liquors tends to increase the quantity of milk at the expense of its quality. Occasionally it is necessary to add some one of the many prepared foods.

Poor hygiene, deficient out door exercise, nervous excitement, constipation, etc., all have a prominent part, and often a trip to the seashore seems the most useful remedy to be had.

Other papers in this issue are "Surgical Treatment of Idiocy and Microcephalus," by Dr. A Jacobi; "Pus Inoculations and Certain Eye Affections in Children," by Dr. George Carpenter; " Hæmatoma of the Sterno-Mastoid Muscle," reported by Dr. Floyd M. Crandall; "Removal of the Head of the Femur for Tubercular Disease," by Dr. B. Merrill Ricketts; "Pemphigus Vulgaris Acuta in a Child," by Dr. Henry E. Tuley, and some clinical memoranda.

Thyroid Extract in Washerwoman's Eczema, and as a Local Application.

S. H., aged 42, a washerwoman, was placed on the sick list on January 27th. The patient was suffering from an acute attack of typical eczema, of the impetiginous type, with intolerable itching and exudation. The legs and arms were chiefly affected. She was unable to stand to do her daily work. She was treated with the ordinary remedies for a week, and these failing to do her any good, I determined to give thyroid tabloids a trial.

On February 6th three tabloids were daily prescribed. The result was most gratifying. In twenty-four hours she began to peel, and when I visited her on February 9th the epidermic scales and crusts filled the bed and littered the floor. The patient expressed herself much improved by the medicine, and the soreness about her limbs had disappeared. The eruption still further yielded to treatment, and on February 12th she was able to attend at the out-patient department practically convalescent.

This patient occupied a small room in a back court, the general surroundings being very unfavorable for a good recovery. I think the remedy undoubtedly had a curative effect in this case.

PERISCOPE.

IN CHARGE OF WM. E. PARKE, A.M., M. D.

MEDICINE.

Absorption of Salicylic Acid by the Skin and its Use in Acute Rheumatism.

Dr. Bourget (*Revista de Ciencias Medicas de Barcelona,*) concludes as follows:

1. Absorption of salicylic acid by the skin is very rapid and intense. The skin of youthful individuals is most absorbent, while persons with white skins are more so than those with brown or black.

2. The rapidity and intensity of absorption depends upon the vehicle in which the acid is dissolved. Fatty substances especially favour its introduction through the skin, while with vaseline or glycerine it is less.

3. The treatment of acute articular rheumatism by a salve of salicylic acid and turpentine is to be recommended. It is less servicable in other forms of rheumatism, yet it might be of use as an adjunct in massage.

4. In gonorrheal rheumatism it is inactive.

Diphtheria.

The Polyclinic summarizes the treatment as follows:

1 Germicidal treatment, preferable by the use of strong hydrochloric acid, used early to be effectual; especially valuable in cases begining on the tonsils.

2. Local cleanliness by the use of a weak antiseptic solution in the pharynx.

3. Nasal syringing with the same solutions in every case where there is nasal discharge.

4. Alcoholic stimulents begun as soon as the first systemic effects of the poison are seen, and in very severe cases pushed to the point of tolerance.

5. Calomel fumigations as soon as laryngeal symptons appear.

6. Intubation in laryngeal cases not relieved by fumigation.—L. Emmett Holt in *Archives of Pediatrics.*

Jaundice and Emotional Disturbance.

Dr. E. Lubbock (Fulham Road, S. W.) writes:

"On the evening of March 31st last I delivered a fragile, highly sensitive young lady (by no means hysterical, by the way), a primipara, of a still born male child. The 'waters,' I was informed had broken and escaped ten days previously. Delivery was instrumental, and was accomplished, while the patient was under chloroform, with some difficulty. Some thirty-six hours after, my patient, otherwise doing well, developed jaundice, which speedily became intense. There was no pain, no nausea. and the temperature was normal. The lochia were foul, otherwise there have been no troubles, and to-day, five days since its appearance, the jaundice is beginning to fade. Four of my medical neighbours whom I have asked have never seen a like case, neither has such a one been seen by my old teacher, a gentleman who has been for many years obstetric physician to one of the great London hospitals, so I venture to bring the case to your notice. Was the jaundice due to emotional disturbance?—*British Medical Journal.*

The Physical Diagnosis of Gall Stones.

Gebhardt observes that the attack usually begins four or five hours after the chief meal, that is, shortly after the entrance of the stomach contents into the duodenum. According to the size and position of the stone after it has passed into the common bile duct, distension of the gall-bladder may be recognized at once, or later (when the gall-bladder has been copiously filled, or not at all.) The swelling lies between the right parasternal line and the anterior axillary line, mostly a little to one side of the right rectus muscle. If the gall-bladder is much distended it may give rise to errors in diagnosis. This distention only takes place in a minority of the cases. It may be absent owing to the smallness of the gall-bladder, or to the obstruction being incomplete, or lasting too short a time. It occurs in severe attacks, or in those who have had repeated attacks. The commencement of the attack may last a couple of hours without pain, during which time the gall-bladder may be palpable. The shrinking of the swelling shows the end of the attack.

This is due to local peritonitis, and it explains the continuance of pain. An ice-bag is more useful here than warm applications. The liver may swell after severe attacks and fever be present. Attacks may occur with pain and fever, but there is neither swelling of the gall-bladder nor of the liver, and no stone is found in the stools. It is thought that the stone slips back into the gall-bladder, but other possibilities exist. The swelling of the gall-bladder may be due to obstructions having other causes, but it does not occur in cardialgia, nor in heptic colic of purely nervous origin. This latter is observed in tabes, hysteria, multiple sclerosis, and may even be accompanied by jaundice. When, after several attacks no stone is found, no friction sound heard, and no swelling of the gall-bladder felt, cholelithiasis may, with tolerable certainty, be excluded, and neurotic hepatic colic may be assumed with great probability.—*British Medical Journal.*

Extract of Bone-Marrow in the Treatment of Anæmin.

Mann (*Lancet*, No. 3680, p. 599), viewing the red matter of bone as the chief agent in promoting the development of red blood corpusoles, concluded that an extract of this substance, introduced into the human organism

while in an anæmic state, might act as a stimulant to the formative process, and increase the rate of production of the red corpuscles. As the tissue-forming power is more active in young than in older animals, the bones of the former are to be preferred as a source of the extract. To prepare this the heads of the long bones obtained from recently killed calves, with other portions of bone that contain red marrow, are broken into small pieces and digested in glycerin, with frequent agitation. The extraction is complete after the lapse of several days, when the extract is filtered off and is ready for use. It is red or reddish-brown in color and devoid of unpleasant taste or odor. It may be given in teaspoonful doses once or twice daily. In a series of cases of anæmia of varying kind and origin, in which the extract was employed, encouraging results were obtaned.—*Med. News.*

Tracheal Irrigations in the Treatment of Croup.

After giving the details of a successfully treated case of croup by the method of tracheal irrigations, the child being placed in an inclined position, Guelpa (*Journ. de Medicine de Paris*) draws the following conclusions. (1) Tracheal irrigations, while the child lies with the head lower than the feet, are not only destitute of danger, but are also well borne and easy of application. (In the case described by the author the irrigations were practiced by the father of the little patient, with the aid of the servant.) (2) The constant inclined position of the patient in bed facilitates the expulsion of bronchial mucosites and is a very practical measure, of great value in the treatment of croup in all the stages of the disease. (3) Abundant irrigations exercise a beneficial influence also in diphtheritic manifestation of the throat and nose; therefore they ought likewise to be practiced in cases of diphtheria of the larynx and trachea. (4) Finally, the case that has been described seems to show that, with reference to the etiology and treatment of concomitant or late thoracic lesions of croup, these cannot be looked upon as direct or indirect consequences of respiratory infection, but that the condition of the digestive organs must be considered also; indeed, the case shows that the infection of the bronchi and pleura was of an intestinal origin.—*Therapeutic Gazette.*

SURGERY.

In-Growing Toe Nails.

Much is continually being written and published in reference to this common and troublesome affection, caused by high heeled and narrow toed boots and shoes. The following treatment is about all that can be said philosophically in regard to the treatment. Cut out a triangular portion of the center of the nail, having a wide base at the free edge of the nail, and a fine point at or near the matrix. This will cause the nail to contract from the edge toward the center, and if kept up for six months will quite alter the shape of the nail making it filbert-shaped and prominent in the center. The edges of the nail should be raised and separated from the soft parts into which they intrude with a piece of worsted, coated with mercurial ointment, or Monsel's solution of iron.

When very sensitive granulations exist, some extract of belladonna and resin ointment rubbed together form a good application.

Syphilis of the Spinal Cord.

Virchow (*Med. Week*) is of opinion that evidence is lacking of ætiological relationship between syphilis and tabes, nor is it possible, clinically speaking, to decide the question from the information furnished by the "reminders," seeing that syphilis is practically of universal distribution. Moreover, there is nothing in the evolution of tabes that can be compared with what is known as visceral syphilis, which tabes would most likely resemble if it were in any way dependent on such a cause. But tabetic patients present no symptoms of visceral syphilis, nor is any tabetic lesion observable in grave cases of visceral syphilis. This is no absolute demonstration of the non-existence of the relationship which is said to exit between syphilis and tabes. The evidence in the favor of the latter hypothesis is strong enough, in his opinion, to induce him to suspend judgment on this much debated question. This position is essentially the judical one adopted by many neurologists not only as to tabes but also as to paretic dementia.

Nerve Suturing.

When drugs fail, surgery often comes in and effects a cure. The fact that severed and even exsected nerves will unite when such a thing is not desired and also that ends of nerves at times will not unite even after the most careful suturing, has led Dr. DeForest Willard to perform some experiments on animals in nerve suturing. He operated on dogs and after suturing the nerve ends he let the animal live until the function of the nerve was restored and then made a post-mortem on the killed animal and examined the sutured part of the wound both macroscopically and microscopically and from his work published in the *International Medical Magazine* he thinks he has demonstrated that:

1. Functional restoration is possible.
2. The closer the apposition the more speedy and complete will be the restoration.
3. Union is accomplished chiefly by the reaching out and development of nerve-fibres from the divided proximal end, these fibres pushing their way across the connecting link of fibrous tissues.
4. Engrafted nerve-tissue or flaps cut from the nerve may serve as a framework for new tissue, or may produce embryonic nerve-fibers capable of assisting in reunion.—*Maryland Med. Journal.*

OBSTETRICS.

Pregnancy after Ventrifixation.

Lohlein (*Deut. med. Woch.*,) says that ventrifixation has maintained its position as a method for maintaining the uterus in a forward position with moderate elevation which, is at once reliable and unattended by unpleasant consequence. It is, however, indicated only when very considerable inconveniences are to be attributed to the abnormal position of the uterus. He reports two cases in which pregnancy occurred after ventrifixation: (1) A woman, aged 30, had ventrifixation performed in July, 1892, on account of prolapse; in December, 1893, she was delivered of a child; the involution of the uterus proceeded satisfactorily. (2) A woman, aged 35, had myomectomy performed in November, 1892; as the uterus was retroflexed, the bed of the tumor was stitched to the abdominal wall; five months later she had severe nausea and vomiting, and was found to be pregnant; the adhesions between the uterus and abdominal wall could be felt; subsequently she was delivered of a well developed child, which, however, died shortly afterwards. The ventrifixation was undertaken here to guard against bleeding and the infection of the peritoneum, in addition to the above named reason. This method has been of service to the author in cases of the enucleation of large myomata He cites a case in which a rapid pulse and raised temperature led him to reopen the adomen, and he stitched the bed of the tumor to the abdominal wall with the best results. The indications for ventrifixation are thus not to be limited by any fears in regard to conception and gestation. The bands of adhesions take part in the involution just as the utero-sacral and broad ligaments do. Thus there is reason to believe that the fixation will still remain sufficient. In both cases there was marked nausea and vomiting during the early months of the pregnancy, severer than in previous pregnancies.—*British Medical Journal.*

ARMY AND NAVY.

CHANGES IN THE U. S. MARINE HOSPITAL SERVICE, FOR THE FOUR WEEKS ENDING JUNE 23d, 1894.

Hermon A. H., Past Assistant Surgeon, granted leave of absence for five days, June 18th, 1894.

Woodward R. M., Past Assistant Surgeon, to proceed to Cleveland, Ohio, for duty, June 11th, 1894.

Wertenbaker C. P., Past Assistant Surgeon, to proceed to Reedy Island Quarantine, for special temporary duty, June 12th, 1894.

Steward W. J. S., Assistant Surgeon, granted leave of absence for thirteen days, May 29th, 1894.

Prochazka Emil, Assistant Surgeon, to proceed to New York, N. Y., for duty, June, 11th, 1894.

Thomas A. R., Assistant Surgeon, to proceed to St. Louis, Mo., for duty.

NEWS AND MISCELLANY.

DEER PARK

ON THE CREST OF THE ALLEGHENIES.

To those contemplating a trip to the mountains in search of health and pleasure, Deer Park on the crest of the Allegheny Mountains, 3,000 feet above the sea level, offers such varied attractions as a delightful atmosphere during both day and night, pure water, smooth, winding roads through the mountains and valleys, and the most picturesque scenery in the Allegheny range. The hotel is equipped with all adjuncts conducive to the entertainment, pleasure and comfort of its guests.

The surrounding grounds, as well as the hotel, are lighted with electricity. Six miles distant on the same mountain summit is Oakland, the twin resort of Deer Park, and equally as well eduipped for the entertainment and accommodations of its patrons. Both hotels are upon the main line of the Baltimore and Ohio Railroad, have the advantages of its splendid Vestibuled Limited Express trains between the East and West. Season excursion tickets, good for return passage until Octobor 31st, will be placed on sale at greatly reduced rates at all principal ticket offices throughout the country. One way tickets reading from St Louis, Louisville, Cincinnati, Columbus, Chicago, and any point on the B. & O. system to Washington, Baltimore, Philadelphia or New York, or vice verse, are good to stop off at either Deer Park, Mountain Lake Park or Oakland, and the time limit will be extended by agents at either resort upon application, to cover the period of the holders visit.

The season at these popular resorts commences June 23d.

For full information as to hotel rates, rooms, etc., address George D. DeShields, Manager, Deer Park, or Oakland, Garrett County, Maryland.

SUMMER VACATION TOURS.

The Baltimore and Ohio R. R. Co. now has on sale at all its offices east of the Ohio River a full line of tourist excursion tickets to all the lake, mountain and seashore resorts in the Eastern and Northern States and in Canada. These tickets are valid for return journey until October 31st. Before deciding upon your summer outing it would be well to consult the B. & O. Book of "Routes and Rates for Summer Tours." All B. & O. Ticket Agents at principal points have them, and they will be sent post paid upon receipt of ten cents, by Chas. O. Scull, General Pass. Agent, B. & O. R. R., Balto., Md.

THE

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ORIGINAL ARTICLES.

THE RELATION OF CHEMISTRY TO MEDICINE.

OSWALD L. SCHREINER, PH. G., BALTIMORE, MD.

It would be pure, inexcusable ingratitude upon the physician's part to ignore the assistance of chemistry in his professional career. Chemistry has without a doubt done more to further the art and science of medicine, than all the other allied sister sciences. The progress of the healing art is in direct proportion to the advance in chemistry; daily this fact is verified by the articles mentioned in the prescription of the physician. He no longer (or very seldom, at least,) orders a long list of crude drugs to be comminuted, and an infusion or decoction to be prepared, as was the custom not so very long ago; but he now orders mostly the active constituent, be it alkaloid, glucoside, volatile oil, resin, or oleoresin, of the drug, combined with definite inorganic compounds, or even with one or more of the newer synthetic remedies, whose number has increased so remarkably within the last decade. Are all these not directly or indirectly the product of chemical science? Had not their discovery or manufacture a bearing upon chemistry? Was not in their production chemical force or affinity called into action? Or is not chemical action going on in the animal system at all times, and when these remedies are administered, is not chemical reaction taking place between them and the constituents of the individual cells? Let us then consider this subject in historical order.

Many of the inorganic compounds were known to the ancients, but were not very extensively used in medicine; vegetable and animal drugs were the remedies then in vogue. It would be useless to mention the many curious and ridiculous animal remedies of the past; they have been mentioned so often. After a time chemical facts became more and more known through the untiring alchemist, then in search of the method or process by which the baser metals could be changed to gold, and always on the look-out for the "elixir of life," by means of which the old, feeble and unhealthy might be changed to eternal youth and health. As he, never abating, never lacking energy to discover these impossibilities, formed a new compound, his first duty was to ascertain how much nearer he was to his great object. Finding that his compound was not gold, contained no gold, and no gold could come of it, he would try it upon the animal system, to ascertain its action thereon. Thus the physiological properties of these compounds were being ascertained and put to practical use in combating disease. The barbaric remedies were fast losing ground. The *art* of chemistry still advanced, more facts were continually added to the list; but it remained for Lavoissier, the "father of the science of chemistry," and Dalton to discover the relation existing between these facts and chemistry became a *science*.

By this chemistry received a new impetus, the newly created science prospered, and medicine had gained a valuable ally. Physiological chemistry grew and

prospered from the mother science. Much has been achieved by this branch and doubtless more will be done; the field is broad, the work is interesting, and much remains to be known. The results achieved by this branch will not be reviewed here, they are known to all. We call physiological chemistry a branch. Yet is it a branch of chemistry or of medicine. The point is hard to decide.

By this time the barbaric remedies had almost entirely disappeared; vegetable drugs and inorganic compounds had replaced them. With the aid of chemistry, man now sought out the active parts of such important drugs as opium, cinchona, etc. Since the time of the discovery of morphine by Sertürner, medicine has continually been enriched with active medicinal agents. Still their number is increasing, still they come, the end is not yet. To-day the active constituents of almost every drug are known; many of these have been applied advantageously in the treatment of disease. Not only do these substances exist as a concentrated part of the drug from which they are obtained, but they have been investigated by the chemist and found to be definite chemical compounds, that is they never vary in their composition. They have been classified into groups. For instance, the volatile oils, the mixed oils, the alkaloids, the resins, the glucosides, etc. all fall into groups, the members of which show allied chemical constitution and properties. The constitution of these compounds—that is, the relation which the atoms or groups of atoms bear to each other in the molecule of the compound—has and is yet being investigated. Many are already known, and their constitution being known, they can be prepared synthetically by the chemist, by means of a series of chemical changes. During the investigation of these compounds the chemist formed many derivatives of them, some of which have become valuable therapeutic agents, such as apomorphine obtained from morphine or apocodeine from the allied alkaloid codeine.

In the attempt to form the alkaloids synthetically many new intermediate products are being discovered, whose physiological action is then ascertained by experiments upon the lower animals. In this manner many of the valuable "coal tar derivatives" have been obtained. The physician can assuage pain and reduce dangerous fever by means of the antipyretic, analgine and hypnotic remedies in cases against which his forefathers were completely powerless. In the course of manufacture and investigation of the aniline colors many of these compounds are formed. Our most valuable remedies of to-day were discovered in this or similar manner; salicylic acid, salol, phenacetine antipyrine, acetanilid, sulphonal, trional, tetronal, etc.

In 1869 Mendelejeff gave to chemistry its most important, the fundamental law of chemistry, the *periodic law*. It may be briefly stated as, "the properties of an element are functions of its atomic weight." Since the announcement of this law it has not only been proven that physical and chemical properties are functions of the atomic weight, but also that the action upon the animal system bears a relation to the atomic weight. The physiological action of the elements in reference to the periodic system has been investigated by Dr. Curci of Italy. The results obtained by this investigator may be briefly stated. If we take the elements of group I of the periodic system, we will find that those with the lower atomic weight act mostly upon the muscles, while those with higher atomicity act strongly upon the nervous system. They may be arranged as follows:

Act on the muscles.
Cs, Rb, K,—Li—Na—Cu, Ag, Au.
Act on the nerves

Lithium and sodium connect cæsium, rubidium, and potassium, on the one side, with the copper, silver and gold on the other. The elements of group II may be similarly arranged.

Act on the muscles.
Ba, Sr, Ca,—Be—Mg—Zn, Cd, Hg.
Act on the nerves.

The other groups may be taken up in like manner. Thus we see that those elements which are most closely related to each other in chemical properties, also resemble each other remarkably in their action upon the animal system.

Analogy or identity in chemical composition, however, is not a guarantee of similar physiological action. Ammonium cyanate and urea, or acetic acid and methyl formate contain the same elements in the same proportion and quantity, that

is, they have the same identical chemical composition, yet their physiological properties differ, due to a different atomic arrangement. Thus,

Ammonium cyanate. Urea

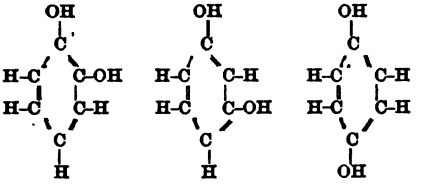
$NH_4 \diagdown CN \diagup O$ $NH_2 \diagdown NH_2 \diagup CO$

Acetic acid Methyl formate

$C_2H_3O \diagdown H \diagup O$ $CHO \diagdown CH_3 \diagup O$

Physiological action is therefore dependent upon the arrangement of the atoms within the molecule of the substance. Further, we may also say that physiological action is at least modified, if not changed completely, according to the relation the groups of atoms or radicals bear to each other in the compound. Pyrocatechin, resorcin and hydroquinone are in chemical constitution closely allied, differing only in the relative position of the two hydroxyl groups (OH) contained in the molecule. This difference may be noticed by comparing their constitutional formulas here given.

Pyrocatechin Resorcin Hydroquinone



In pyrocatechin the two hydroxyl radicals (OH) are represented as adjoining each other (ortho-position), in resorcin they are alternate (meta-position), and in hydroquinone opposite to each other (para-position). While the physiological properties of these compounds are similar they are not wholly identical. Again, in the manufacture of that excellent remedial agent, phenacetine, only para-phenetidin is used; before being acetylized it is carefully separated from the ortho-phenetidin which accompanies it. Exactly why these differences in property should be so, we do not know.

Further, the substitution of one radical for another in a compound will increase or diminish its therapeutic value. As illustration of this we may take sulphonal and the allied compounds, trional and tetronal. Trional is sulphonal in which one of the two methyl groups (CH_3) has been replaced by an ethyl group (C_2H_5); while in tetronal two ethyl radicals have replaced the methyl groups in sulphonal. In other words, sulphonal contains two methyl radicals, trional one ethyl and one methyl radical, and tetronal two ethyl radicals, otherwise the compounds are identical. Their relationship will be readily seen by a comparison of formulas.

Sulphonal Trional Tetronal

$C\begin{cases} SO_2C_2H_5 \\ SO_2C_2H_5 \\ CH_3 \\ CH_3 \end{cases}$ $C\begin{cases} SO_2C_2H_5 \\ SO_2C_2H_5 \\ CH_3 \\ C_2H_5 \end{cases}$ $C\begin{cases} SO_2C_2H_5 \\ SO_2C_2H_5 \\ C_2H_5 \\ C_2H_5 \end{cases}$

Tetronal is, according to Baumann and Kast, twice as powerful as sulphonal; trional occupying an intermediate position in therapeutical effect as well as in chemical constitution.

We will now consider a most important part, namely the modification of compounds by the chemist to meet the requirements of the therapeutist. We will select as an illustrative case the recently introduced antipyretic "phenocoll," a derivative of phenacetine. The only objection to the excellent phenacetine is its almost entire insolubility in water. Its innocuousness is believed to be due to the presence of the oxyethyl group; a group not present in antipyrin nor acetanilid, hence their toxicity. For instance, benzocoll, which differs from the innocuous phenocoll only in *not* containing the oxyethyl group, possesses the toxic properties of acetanilid. The problem then as placed before the chemist by the therapeutist, was to render the insoluble phenacetine soluble, without affecting the oxyethyl group, and without destroying its antipyretic property. The numerous soluble compounds which were produced, were all found to be devoid of antipyretic properties. The introduction of a salt forming amido group into the acetyl residue of the original acetyl-amido group was then tried. The product, amido-acetyl-phenetidin or "phenocoll," retains the innocuousness and prompt antipyretic action of phenacetine, while it is, when in combination with acids as salts, very soluble. It is claimed to be more prompt in action than the latter substtanc, one to its greater solubility and consequent more rapid absorbtion. Here we see chemistry lending a helping hand to therapy, not only in producing new substances which may be used in its do-

main, but also modifying such substances to meet certain requirements of disease.

In glancing over this field of research the question presents itself to the inquiring mind: What wonderful remedies may not the future have in store for us? What may not the future chemist and physiologist bring to light? Can the mind conceive the day when these relations between chemical properties and constitution and physiological action will be known; when physiological properties may be predicated with certainty of a compound which does not as yet exist, but whose chemical composition and constitution is known. When the periodic system was first formed, there were found gaps in the series of elements. Mendelejeff claimed that elements would yet be found which would fill these vacancies; and by means of his admirable law he described the properties of these elements and stated their atomic weight and valence, years before they were discovered. Three of the elements have since been discovered and found to possess the properties assigned to them.

Chemico-physiologic research is in the proper channel; it may be likened to a river, continually gaining volume, force and extent as it rolls onward to its destination—the health, happiness and welfare of the human race.

PLACENTA PREVIA CENTRALIS: REPORT OF A CASE—TREATMENT, ETC.*

J. CAMPBELL EDIN, M.D., C. M. (McGILL,) L. R. C. P., SEAFORTH, ONT.

I was called on the 16th of April last at 11 p. m. to see Mrs. B., of Seaforth, who was over eight months advanced in her eighth pregnancy.

She was not in labor, but was alarmed on account of a sudden hemorrhage which had taken place without pain. Upon enquiry ascertained that a similar flow of blood had taken place under the same conditions about the middle of February, and again about the same time in March, but she had not called in a physician. The discharge, however, upon this occasion was more profuse than upon either of the previous occasions.

Made a digital examination and found the internal os covered by a soft spongy substance. By pressing the uterus firmly down, could feel a hard body above the spongy mass in question.

The cervix was rigid and undilatable. The examination caused some pain with a slight increase of the discharge. My diagnosis was placenta previa centralis. Told the patient and her friends that she was not going to be confined that night. With the idea of relaxing the parts and producing rest—gave her gr. xvi of chloral hydrate and repeated with gr. viii every half hour until she was asleep, which was within the hour when I left her for the night.

From this time we kept a close watch upon our patient, keeping her under the influence of the chloral—with an occasional dose of morphia, so as to keep down all pain and procure sleep at night.

There was a moderate flow of blood nearly all the time—but not enough to weaken her to any appreciable extent. Examinations from time to time satisfied me that the parts were being prepared for the trying ordeal through which she must sooner or later pass.

On the morning of the 21st, while on my way to the patient's house, met a messenger coming for me with a note which stated that she had flooded more profusely than ever before.

When I reached the house and saw the amount of blood passed and examined the patient—I made up my mind that the time for action had arrived.

Asked for a consultation with another physician when the assistance of my townsmen, Dr. Smith was procured.

A careful digital examination revealed the lower surface of the placenta, which could be felt through the cervix, its rough spongy texture rendering mistake almost impossible. It was a clear corroboration of my previous diagnosis. The index finger could be passed beyond the free edge of the placenta on the right side of the patient, and high up could be felt the vertex presentation in the second position.

*Read at the meeting of the Ontario Medical Association held in Toronto, June 6th and 7th, 1894.

There was every evidence that the unavoidable hemorrhage was due to the placental separation as a consequence of cervical dilatation.

The gradual loss of blood as previously related, which had been going on for some days, with the fact that there was no doubt as to the actual condition with which we had to deal, called for immediate treatment, to save if possible both mother and child.

In regard to the latter, however, palpation and oscultation gave little hope to expect the delivery of a living child.

Upon consultation it was decided to put the patient under chloroform — dilate with the hand—turn by the bi-polar method (if possible,) and deliver without any more delay than would be absolutely necessary—using the forceps for the delivery of the head, if required.

The consent of the patient and her husband having been obtained, she was carefully prepared for treatment as follows: The lower limbs, from waist down, were sponged with hot bi-chloride solution—care being taken to thoroughly cleanse the vulva and surrounding parts.

The vagina was carefully irrigated with a hot carbolic solution 1 to 40, from a fountain syringe and the patient placed upon a perfectly clean compress of folded sheets. After a careful use of the nail brush on my hands and arms and washing my hands for several minutes in hot carbolized water, and afterwards immersing them in a 1 to 2,000 solution bi-chloride of mercury, I felt that nothing had been neglected to render everything in contact with the patient thoroughly aseptic.

We have thus minutely described the preparation of the patient, as we positively believe that her excellent recovery depended in a great measure on the antiseptic precautions used.

As soon as my assistant had got the patient under the influence of the chloroform I lubricated the back of my right hand with boric acid ointment and proceeded to pass it into the vagina. After this I began dilating the os and cervix which we found tolerably dilatable, using first one finger, then two, next three, and lastly the whole hand.

I passed the hand up the right side where the placenta was partially detached until I reached the bag of waters, and by pressing down the uterus with the left hand was able to rupture them. I could distinctly touch the head of the child, and by internal and external manipulations was able to turn by what is known as the bi-polar method—and got hold of a foot which I brought well down—and all hemorrhage ceased.

I describe this the more particularly as most authors omit any description of the operation, and others who describe it never performed it themselves and either speak too lightly of it or surround it with unnecessary warnings which are apt to frighten rather than aid the inexperienced operator.

Pains now came on at regular intervals and we used traction during each pain. We had some difficulty in getting the arms down as they were extended over the head of the child. We succeeded and the head engaged in the superior strait. The real difficulty now began. I found that with all my art and as much force as was justifiable I could not deliver the head. Upon particular examination I made up my mind that we had a hydrocephalic head to deal with, which diagnosis was afterwards proved to be correct We now had recourse to the forceps, which was in readiness for such an emergency. I managed to apply them without much difficulty and directing the doctor to press firmly on the uterus, made traction during the pains and soon had the head in the world. The placenta followed shortly afterwards, its expulsion being aided by Crede's method.

No ergot was given owing to the nausea occasioned by the chloroform. The whole operation as described occupied only about thirty-five minutes. After allowing the patient to rest for a few minutes, the clothing was carefully changed and the external parts and limbs sponged carefully with the antiseptic solution. The bandage and compress over the uterus were then applied and over the vulva was placed an antiseptic pad.

Severe after pains which followed were relieved by hypodermic injections of morphia.

The after treatment consisted in syringing the vagina night and morning with hot carbolic acid lotion and in giving a mixture of magnes. sulph., which produced on an average three loose motions daily, and most effectually prevented any trouble from the secretion of milk.

The temperature never rose even one degree; she made an uninterrupted recovery.

Remarks:—There is no complication in pregnancy more trying to the physician than placenta previa, and by trusting to the old method of plugging and waiting, the case drags slowly, a constant source of danger to the patient and anxiety to her attendants.

By the new method—namely, the induction of premature labor—under antiseptic precautions and the disuse of the tampon as a means of controlling hemorrhage, we avoid the danger of septicemia on the one hand and fatal hemorrhage on the other. Moreover it can be shown that the chances of life to both mother and and child, but especially to the mother, are much improved by the new method.

Dr. Simpson, of Edinburgh, who compiled a table of 399 cases, shows that 115 of the mothers died, or 1 in 3. Muller reckons that the death rate to mothers by the older methods was 36 to 40 per cent.

By prompt induction of labor, Thomas had two deaths in 11 cases. Hecker had 3 in 40 cases. Hoffman 2 in 30 cases, and Murphy 15 cases without a single death.

By the use of the plug—no matter how aseptic it is made, the cervix with its bleeding vessels is exposed to the air, with its poisonous germs—the very condition that makes compound fractures so much more serious than simple ones.

By the method we advocate, this danger is avoided.

Conclusions:—In conclusion then we contend that in the treatment of placenta previa the following rules should be followed:

1st. Terminate gestation as soon as possible.

2nd. Control the hemorrhage by the introduction of the hand into the vagina—the index finger through the cervix, and separate the placental attachment as far as possible.

3rd. Discard the tampon as a fruitful source of infection.

4th. Use the hand in dilating the cervix after the manner we have just described—turning by the bi-polar method—if possible.

5th. Take aseptic precautions previous to the operation and carry out the most approved antiseptic treatment afterwards.

A NEW OPERATION FOR PILES.

J. S. WIGHT, M. D., Brooklyn, N. Y.*

The instruments required are: a pair of tenaculum forceps; a strong curved needle; a pair of pressure forceps, with slightly curved jaws that are about four centimetres in length; and a pair of scissors curved on the flat.

The pile is gently drawn down with the tenaculum forceps, and then clamped with the pressure forceps. All that part of the pile below and outside the pressure forceps is cut off evenly with the scissors; a knife may besubstituted for the scissors. The needle is armed with a cat-gut suture of proper strength; and the suture is carried around and above the jaws of the pressure forceps, so as to embrace and include all the stump of the cut-off pile; that is, the suture is a continuous one. One end of the suture projects from one border of the pile stump, and the other end projects from the other border. The ends of the suture are now put together in the first step of the surgeon's knot. Then the pressure forceps are unlocked and gently removed, being extracted from the loops of the continuous suture, which is at once drawn tight and the tying completed. If these movements are well executed, there will be no hemorrhage, the wound made by the excision of the pile being securely closed. Each pile, in its turn, is dealt with in the same manner, the pressure forceps being applied in such direction as the judgement of the operator may dictate.

This method of operating has the following advantages: (1) Easy and rapid work; (2) Absence of hemorrhage; (3) Complete excision of the piles; (4) The suture-ligatures take care of themselves; (5) Repair with a small quantity of scar-tissue; (6) The patient can get out of bed in a few days; (7) A good result is quickly obtained.

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COMMUNICATIONS.

NON-OPERATIVE METHODS OF TREATING ANAL FISSURE OR IRRITABLE ULCER OF THE RECTUM.*

LEWIS H. ALDER, JR., M. D.,† PHILADELPHIA, PA.

When anal fissure is of recent origin and not associated with much spasm of the sphincter muscles, there is a fair prospect of cure without operative procedure.

This statement is made advisedly and in the face of a criticism, published in *Mathews' Medical Quarterly*, ‡ of the writer's brochure, "Fissure of the Anus and Fistula in Ano," ‖ in which the following statement is made: "It is a pity that this admirable little work wastes so much time in discussing the palliative (?) treatment of the disease [fissure]. In an affection so simple in its etiology and pathology, and that can be so quickly and radically cured by divulsion of the sphincters, it seem a great loss of time to talk about applying ointments, when it is a recognized fact that not one case in ten is ever benefited by their use."

I do not doubt that the reviewer honestly expressed himself in the statements quoted; and furthermore that the opinion given—that not one case in ten is ever benefited by other means than operative measures — is based upon personal experience. But I must be pardoned for dissenting from the same views, as my experience, whilst not an extensive one, is ample to justify a more conservative treatment of many of these cases.

I am well aware that the operative treatment of fissure is a simple procedure and that the disease is quickly cured by its execution; but I am likewise conscious of the fact that many persons object strenuously to any operation.

No matter how trifling its import be to the surgeon, an operation to the patient is something which is dreaded, and it behooves the practioner to remember that the majority of persons are unwilling to submit to operation until they are personally convinced that such a course is the ultimatum.

It is my purpose in presenting this paper to indicate how over 75 per cent. of the cases of fissure of the anus which have come under my observation, both in hospital and private practice, have been cured by non-operative measures. No less an authority than Allingham¶ states that the curability of this lesion does not depend upon the length of time it has existed, but rather upon the pathological changes it has wrought. He also adds that he has cured fissures of months' standing by means of local applications, where the ulcers were uncomplicated with polypi or hemorrhoids, and where there was not any marked spasm or thickening of the sphincters.

It is essential to the success of the treatment of fissure by local applications, that rigid cleanliness of the parts be maintained; for this purpose the anus and the adjacent portions of the body should be carefully sponged night and morning and after each stool with tepid water. It is also highly important that attention be given to the condition of the patient's bowels. Regularity of habit should be established, and the evacuation rendered semi-fluid—as figured or hard stools materially aggravate the symptoms.

To accomplish these purposes, enemata or mild aperients should be employed, and the diet must be regulated, the use of bland and unirritating food being enjoined.

All drastic purges should be avoided, as they are more or less irritating to the extremity of the rectum. To establish a daily evacuation of the bowels and to render the movement as painless as possible, I am in the habit of ordering an enema of warm water, or one of rich flaxseed tea, say from half a pint to a pint, to be administered every evening; preference being given to the night time, as then the

*Read before the American Medical Association, June, 1894.

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‡ January, 1894, vol. i, No. 1, page 185.

‖ Physicians' Leisure Library Series, 1892. Geo. S. Davis, Publisher, Detroit, Mich.

¶ "Diseases of the Rectum," fifth edition, London, 1888, page 215.

patient can assume the recumbent posture, which, combined with the rest, affords the most relief from subsequent pain.

If the first enema proves ineffective, it should be repeated in half an hour. In order to relieve the pain and spasm of the sphincters attending the evacuation, it is well to use a suppository about half an hour before the injection is employed, consisting of:

℞ Ext. belladonnæ..... ½ to ⅓ grain
Ext. opii aq..... ¼ to ⅓ grain
Ol. theobromæ..... 10 grains
Misce et fiat suppositoria j.

Or an ointment of conium may be used as recommended by Mr. Harrison Cripps:*

℞ Ext. conii..... ʒ ij
Olei ricini..... f ʒ iij
Ung. lanolinii.....q. s. ad ʒ i j

A small quantity of this ointment should be smeared on the part five minutes before expecting a motion, and again after the bowels have been moved.

In applying any of the various local remedies to an anal fissue it is necessary first to expose the ulcer to view, which can be done by means of the fingers of the operator or his assistant, and to anæsthetize its surface with a 4-per-cent. solution of the hydrochlorate of cocaine, well brushed in with a camel's-hair pencil or with a piece of cotton attached to a probe. The application of the cocaine may have to be repeated once or twice, at intervals of three or four minutes, in order to obtain the desired anæsthetic effect. If any ointment has been used about the fissure, the anus should be subjected to a hot-water douche before using the cocaine, as this drug will not exert its anæsthetic influence on a greasy surface.†

Among the different remedies that have been used in the local treatment of fissure of the anus may be mentioned the following: Nitrate of silver; acid nitrate of mercury; fuming nitric acid; carbolic acid: sulphate of copper; the actual cautery; and chloral hydrate.

Of these topical applications the nitrate of silver is the best. Its effects are various: it lessens or entirely calms the nervous irritation which is so important a factor in producing spasmodic contraction of the sphincters; it coats and shields the raw and exposed mucous surface by forming an insoluble albuminate of silver; it destroys the hard and callous edges of the ulcer, and tends to remove the diseased and morbid action of the parts.

The form in which I usually employ this salt is in solution (from 10 to 30 grains to the once). The stick caustic may be also used.

To accomplish the best results, the solution should be used once in twenty-four or forty-eight hours, according to circumstances. It may be applied by means of cotton attached to a silver probe or to a piece of wood.

The application is made by separating the margins of the anal orifice with the thumb and index finger of the left hand, and introducing into the anus the probe charged with the solution. The argentic nitrate is to be applied to the fissue only; a few drops are all that is required. If thorough local anæsthesia has been induced by the use of cocaine, the application of the silver salt produces little (if any) suffering, for by the time the anæsthetic has lost its effect the otherwise acute pain of the nitrate of silver will have passed away.

After each application the part should be smeared well with an ointment of iodoform (30 grains to the ounce). The odor of that drug may be disguised by the addition of a few drops of attar of roses. Iodol may be used instead and in the same way, but I prefer the iodoform, owing to its anæsthetic qualities.

After the ulcer has been touched once or twice with the silver solution, the effect will be, in the cases that are benefited by this treatment, a considerable mitigation of the pain from which the patient suffered when at the closet and afterward, and the sore will present a healthy, granulating appearance and will slowly contract in size.

Unless the fissure be complicated with some other affection, in children and in young persons it is almost always curable by adopting the mode of treatment laid down.

Some authorities speak highly of the use of the acid nitrate of mercury, fuming nitric acid, carbolic acid, the actual cautery, etc., but in my opinion their employment is attended with more suffering than follows the use of the nitrate of silver.

*"Diseases of the Rectum and Anus," second edition, London, 1890, page 189.

†W. P, Agnew. M. D., "Diagnosis and Treatment of Hæmorrhoids. etc.," second edition, San Francisco, Cal., 1891, page 91.

The daily introduction of a full-sized bougie, made of wax or tallow, will sometimes act beneficially in cases of fissure by stretching the sphincter and producing such an amount of irritation as will set up a healing process in the ulcer. An application of cocaine or of belladonna ointment should be made to the part previous to the employment of the bougie.

In the treatment of anal fissure Allingham strongly advocates the local use of the following ointment:

℞ Hydrarg. subchlor..... 4 grains
Pulv. opii
Ext. belladonnæ } āā..... 2 grains
Ung. sambuci..... 1 drachm
M. S.: To be applied frequently.

He states that he had many cures with this ointment alone. Another excellent ointment recommended by the same authority, is:.

℞ Plumb. acetatis
Zinci oxidi } āā..... 10 grains
Pulv. calaminæ..... 20 grains
Adipis benzoinat..... ½ ounces
M.

An ointment of the oxide of mercury, 30 grains to the ounce, has cured many cases.

In conclusion, I would emphasize the fact that in many cases anal fissure, uncomplicated with other rectal affection, is curable by means of non-operative methods of treatment.

A SUGGESTION UPON THE PREPARATION OF THE FINGERS AND NAILS FOR SURGICAL OPERATIONS.*

OSCAR H, ALLIS, M. D., PHILADELPHIA.

The nails form no mean part of a surgeon's outfit. As a covering to the finger they give confidence; in the threading of needles they are often indispensabl e while often, when working among adhesions, they may serve a good turn. If the nails are too long they are in the way, and if too short, a privation. A medium length of nail is an exceedingly valuable helper at times. With some the length of nail is governed by the ability to keep it clean. Hence the nail is kept very short —much to the disadvantage of prehension, in which man excels.

The surgical care of the nails has had its full share of attention. The nail-brush forms a part of every physician's and surgeon's outfit. It is cheap, compact, and moderately thorough. Its disadvantages are that if stiff it is apt to scratch the hand or cut beneath the nails; if soft, it is of little value. To supplement the defects of the brush, some persist in using the point of the nail blade of their pocket-knifes. I say persist in using—as much has been written against the practice. Not only is there danger of cutting the flesh beneath the nail, but it leaves the under surface of the nail rough, making it a ready collector of filth, and less easily cleaned for a subsequent operation.

To avoid the knife I have long used a little wedge-shaped piece of soft pine. This, when wet, frays up, makes a kind of mop, is a good carrier of soap, and enables me to wash out under the nail. The objection to my device was that the pine too rapidly frayed out, became bulky, and required frequent trimming. Finally I hit upon the rubber eraser. A variety is made for artists and school-children that is wedge-shaped. This is ready for use as it is found at the stationer's, though if made a little sharper it is softer and more like a mop. It is pliable, soft, and an excellent carrier of soap.

For the hand, generally the old-fashioned wash-rag cannot be improved upon. It is a good carrier of soap, and with it each finger in turn can be tightly caught and wrung until it is clean. With the nail or hand-brush only the back and front of the fingers get the scrubbing.

In addition to the implements usually deemed important for the cleanliness of the under surface of the nails, a very valuable one is the nail itself. Noticing that a young lady's fingers whom I frequently met were always exceedingly neat, I make bold to ask her method, and was surprised to find that she had nothing more modern than a pair of scissors to trim her nails, and that with wash-rag and the tips of her finger-nails she kept her hands in most perfect order. One thing that may be said of the finger-nail as a nail-cleaning instrument, is that it will not scratch the under surface of the nail, a very important factor in the process, whether one aims at beauty or cleanliness.

*Read before the Philadelphia County Medical Society, June 13, 1894.

ADENOID GROWTHS IN THE DOME OF THE NASO-PHARYNGEAL SPACE.*

J. MORRISON RAY, M. D., Louisville, Ky.

I desire to ask your consideration for an affection of the glandular circle, that under normal conditions surrounds the upper respiratory passages. It consists of an hypertrophy of the collection of lymphatic tissue in the dome of the naso-pharyngeal space and has been variously called hypertrophy of Luschka gland, enlargement of the pharyngeal tonsil or adenoid and lymphoid growth in the roof of the naso-pharynx.

The frequency with which we see children allowed to suffer for years without the recognition of a trouble that leads to a blocking of the naso-pharyngeal space, which, besides interfering with the proper physical development of the child, lays the foundation for an ear trouble that lasts throughout life, is a sufficient reason for presenting the subject for consideration.

It is desirable that the general profession with whom this class of sufferers first come in contact should be apprised of its importance and the promptness with which relief can be obtained.

Recent investigations seem to throw considerable doubt on the question as to whether the normal naso-pharynx contains any visible enlargement of lymphatic tissue. There is no doubt that the mucous membrane in this region abound in submucous collections of lymphoid masses continued upward from the visible aggregation between the pillars of the fauces. What constitutes a healthy appearance of this region is still in dispute.

In my expenience in adults, the normal vault of the pharynx is perfectly smooth, and when I have found depressions, folds, or thickening, there have been symptoms giving evidence of naso-pharyngeal discomfort and a history that pointed to the probable existence in childhood of adenoid growths. In children examinations by the rhinoscopic mirror is often impossible and therefore we must depend upon the results of exploration by the finger or post mortem appearance. The former is not usually resorted to unless there are symptoms pointing to this region and the latter has not in my knowledge been extensively undertaken.

Wright claims "That the vault of the normal pharynx in the infant is a comparatively smooth walled cavity."

The investigation of Killian and Swain seem to show that the so-called Luschka's tonsil has an inconstant embryonal existence, and does not present as such in the normal adult throat, or even often in childhood.

Meyer found 1 per cent. present in 2,000 examinations, Chappell in 2,000 school children examined for the prevalence of throat diseases 3 per cent. had adenoid tissue in abundance. Bliss out of 405 children discovered adenoid in 79. Bronner claims that 4 or 5 per cent. of all children have naso-pharyngeal obstruction from these growths.

We must therefore look upon the presence of visible adenoid tissue in the vault of the pharynx as a pathological condition, often present in childhood, rarely existing in the adult, but like its analogues—the faucial tonsils and the lymphatic tissue lower down in the intestinal tube, begins to atrophy as adolescence is obtained.

During childhood the lymphatic system enjoys its greatest activity, hence at this time they are prone to become the seat of pathological changes that interfere with their nutrition or retrograde metamorphosis. They are often associated with enlarged faucial tonsils and with cervical adenitis.

Heredity plays a part in their development. All observers agree to have seen a number in one family, I have operated on two in the same household. The condition may be congenital.

I have under observation now an infant six weeks old, brought to me for a purulent ophthalmia, in which the mother says there has been difficulty in nasal breathing and a peculiar noise that indicates some obstruction in the naso-pharynx since birth. The child has difficulty in feeding, frequently relinquishing its hold of the breast in order to get air. Examination through the anterior nares shows patulent nostrils, and there is

* Abstract of a paper read before the Louisville Medico-Chirurgical Society, March 23, 1894.

not present excessively enlarged faucial tonsils: The throat space is so small I cannot get my finger well into the vault, yet I am certain that the naso-pharynx contains a quantity of adenoid growths and will require removal before relief is obtained.

Bosworth asserts that a constitutional condition difficult to definitely describe and only one step removed from scrofula, is present in all cases. Racial conditions play an important part. The Jewish race seem to suffer the most. The negro race are remarkably free from this condition; from their well known proneness to suffer from so-called strumous affections this seems anomalous. Yet in my service at the Universary Dispensary where the colored race largely predominates and where so-called scrofulous eye diseases flourish I have encountered in two years, only one case of well defined adenoids and that was a mulatto with the facial type of the Anglo-Saxon. Among the exciting causes the most important is diphtheria and the exanthematous fevers, especially scarlet fever, the patient or his parents being unconscious of any difficulty in nasal breathing until after these diseases. Climatic condition and repeated attacks of so-called head colds probably favor actively in the lymphatic tissue and thus enlargement of adenoid growths.

Woakes prefers the name "Lymphoid Papillomata" and argues that since in their local appearance and tendency to spontaneous disappearance after puberty like warts on the hands, etc. that this is the better name.

In young subjects the amount of fibrous tissue present seems to be small; but when found in children of ten or twelve years of age the growths are much firmer to the touch, less likely to bleed when handled and when examined microscopically show a far more abundant development of fibrous and connective tissue and less so-called lymphatic tissue. This condition will be found to have considerable importance in deciding the method of operation for their removal.

The diagnostic symptoms are both local and general. To one accustomed to see such cases, the facial expression, the round shoulders, and contracted chest are often sufficient. The so-called adenoid physiogomy is familiar to many—consisting of a pinched nasal aspect, elongated face, open mouth, listless dull expression, a peculiar dead nasal twang to the voice and lateral compression of the chest with marked prominence of the sternum, so-called pigeon breast, and more or less prominent in well defined cases. The respiratory symptoms are those of mouth breathing, especially bad at night, constituting the snorer, with restless, loud breathing, frequently interrupted by paroxysms of suffocation and wakefulness. The local symptoms are found both in the nose, throat and ear. The nose generally shows some turgescence of the turbinated, rarely deviation of the septum, and often more or less anterior discharges of mucus that frequently excoriate the nostrils due to the child's inability to blow the nose. The lips will be dry and often fissured, and the tongue furred from mouth breathing. A condition present in many cases is the high arched palate and contracted jaw, with irregular and decayed teeth. I have recently seen a case operated upon, one and a half years ago, in whom the teeth were much distorted and decayed, and a dentist has stated to me that the teeth were much more amenable to treatment since the removal of the cause of the mouth breathing.

I am convinced that cases of excessively enlarged faucial tonsils have always associated with them adenoids, and frequently masses of lymphatic tissue can be seen studded over the oro-pharynx, or as a ridge passing up the lateral walls.

Since the disease is almost entirely confined to children between the ages of three and fourteen, it is often impossible to view the naso-pharynx by the aid of the mirror, therefore, the final point in diagnosis must be made by exploration of the pharyngeal vault by means of the finger. The index finger passed gently into the mouth and against the back-wall of the pharynx can be carried up behind the palate, and the region of the naso-pharynx thoroughly explored. When passed well up the posterior, free edge of the nasal septum and the opening of the nares can be easily felt; on either side, the pharyngeal mouth of the eustachian tube are readily recognized, and the vault swept by the end of the finger.

The symptom depended largely upon by Bosworth, is the spraying of vaseline into one nostril, and if there are no adenoids present, the clouds of vaporized oil will

return through the opposite nostril,—if adenoids are present, no return is noticed from the other nostril. This symptom I am convinced, is of little importance, for the vapor will return unless the naso-pharynx is completely occluded, and when this condition is present, the diagnosis is self evident from other well-known symptoms. Numerous other symptoms have been dwelt upon by various writers but are, I think, of minor importance and only corroborative.

One of a general nature dwelt upon by Guye is what he calls aprosexia and consists of mental hebetude, headache, listlessness, inability to fix the attention and show progress in learning. He claims that this is due to the intimate connection of this region with the cranial cavity through the numerous openings for lymphatics and blood vessels in the sphenoid bone and interference with lymph drainage from the cranial cavity. Others have verified these observations and claim marked improvement in the mental condition by removal of the obstruction.

To my mind the most important lesion resulting directly from this disease is the interference with the organs of hearing. Happily the modern otologist has begun to recognize the fact that the majority of ear troubles are due directly to diseases of the naso-pharynx, and therefore routine examination of these parts is carried out. The majority of adenoid subjects first seek relief for ear trouble. The exact causes of the ear disease present has not been definitely settled. Whether it is due to direct obstruction by pressure of the growth against the mouths of the eustachian tubes, whether to interference with ventilation by preventing the free entrance of air into the naso-pharynx, whether by direct extension of the frequent attack of acute inflammation to which these growths are prone, or to stagnation of the return circulation by pressure of these growths upon the pharyngeal veins, as suggested by Blake, is of no importance from a therapeutic standpoint; probably all are factors, for we do not find abundant tissue or decided obstructed breathing in all cases with ear complications. Blake estimates that 80 per cent. of children with adenoids have ear trouble. The ear trouble consists in recurring attacks of acute middle ear inflammation with suppuration or not, frequent during the winter when children are exposed to the influences of winter changes. These attacks eventually lead to chronic deafness or pus discharges that resist all local medication.

Barrett and Webster, from a study of two hundred cases, go so far as to say that not only are all the middle ear diseases of children traced to the presence of these growths, but the deafness of adults is largely dependent upon the presence of adenoids in earlier life, and thus the establishment of changes that produce later on permanent ear disease.

The treatment of these growths depends upon their character, size, the age of the patient, and the symptoms requiring relief. No doubt attention to the general health by the administration of constructives is often indicated, for by correcting anæmia and aiding in tissue building we hasten growth in the child, and as the naso-pharynx enlarges, the growths are carried farther from the soft palate and the breathing space is correspondingly increased. In my experience local application of medicaments such as caustics or astringents are of no importance and simply produce pain without alleviating the symptoms or lessening the obstruction. The only sure and prompt relief is a surgical one. The methods of procedure advised are, the use of variously constructed forceps, curettes, snares, the galvano-cautery and the finger nail. The galvano cautery is difficult to use in children, dangerous when anæsthetics are administered, and slow in its results, besides it is the most liable of all methods to excite ear inflammation. Snares are difficult to manipulate in the naso-pharynx, and unless the growths are large and pedunculated, a failure to engage them in the loop is probable. The method therefore lies between forceps, curettes, and finger nail. If the growths are abundant, soft and friable, the finger nail can scrape them out quickly and without danger. If they contain considerable fibrous tissue, forceps or curette are required. I have tried the different shaped forceps, but have now discarded them in young children for the improved Gottstein curette, which, if properly used is free of danger to surrounding parts, and the manipulation is quickly accomplished. The question of anæsthesia depends upon the age and tractability of the child. If chloroform is administered the hanging head position must be obtained, lest the

free flow of blood that follows may produce asphyxia. The amount of blood lost is usually not great, while quite free for a few seconds, it quickly stops spontaneously.

In children twelve to fourteen years of age, the post-nasal forceps will often be required as an adjunct to the curette, and if the growth is firm to the finger, the forceps are often alone satisfactory. The Gradle instrument grasps a large piece at one bite and I have found them valuable. In the after treatment nothing is required beyond quiet for a few hours, and keeping the parts free of infection by antiseptic washes. No operation can be considered a success that does not remove all the offending tissue. In my earlier work I attempted to remove them without an anæsthetic, and with forceps; rarely was I able to induce a child to allow the introduction of cutting forceps more than once or twice, but little relief was attained, and I was inclined to believe possibly there was some return. The results of the operation are as satisfactory as any in surgery. The improvement in general health is often remarkable. Jakin reports a case which in two years, a boy increased in weight from 105 to 140 pounds and in height from 5' 3" to 5' 10". Often without internal treatment in a few months the ruddy complexion and increased general vigor is noticeable to all. The family express satisfaction for the relief the operation gives to recurring earaches and ear discharges, and the change in the character of breathing. While we find these growths in children the remnants alone are noticeable in the adult, yet the roughened surface left in the naso-pharynx and the bands of adhesions to the eustachian tubes produce synachia that interferes with its function, and gives rise to permanent ear trouble, and chronic post-nasal discharges that resist all treatment.

I have given a reveiw of the subject to excite discussion and to attract the attention of the society to an often neglected region. I can briefly summarize what I wish to emphasize as follows:

1st. The majority of cases of chronic nasal obstruction in children are due to the presence of adenoids in the naso-pharynx.

2nd. Mouth breathing, snoring, wakefulness, defective mental developement, bad teeth, deformed chests and deafness result from this obstruction.

3rd. The recurring earaches and pus discharges from the ear persistently resisting treatment directed to the ear, are the result of the presence of adenoids and in a majority prompt relief follows surgical removal of the growths.

4th. Many of the ear diseases of adults, and so-called post-nasal catarrhs are the result of adenoids that had not been recognized or treated in early life.

5th. That while adenoids will apparently disappear, as adolescence is attained, they never entirely atrophy. but leave fibrous stumps and adhesion to the eustachian tubes.

6th. Operation for their removal should be undertaken under an anæsthetic and thorough removal accomplished.

7th.—The operation is reasonably safe and besides giving decided relief to the local symptoms in the throat and ear often show wonderful improvement in the general physical condition.

PRELIMINARY REPORT ON THE DIAGNOSTIC VALUE OF PEPTONURIA AND INDICANURIA.*

JOHN H. MUSSER, M. D., AND F. SAVARY PEARCE, M. D., PHILADELPHIA, PA.

The following observations have been made from time to time during the past six months by the writers in order to determine the diagnostic value of the presence of the above-mentioned constituents of urine in disease, and to observe the practicability in daily practice of the methods employed to detect their presence. It is our purpose to continue on a more extended scale the observations here begun.

The specimens of urine studied were taken mostly from the medical wards of the Presbyterian Hospital. Through the kindness of Dr. Abbott, the testing was in the main done in the Hygiene Laboratory of the University of Pennsylvania. Our

*Read before the Philadelphia County Medical Society, June 13, 1894.

appreciation of the aid of the resident physicians, Drs. Arnold, Swan, and Johnson, is hereby acknowledged.

1. Tests. — Von Jaksch† gives two methods for testing for peptone in the urine. The first, that of Hoffmeyer, is far too complicated and is not, therefore, detailed. The second, the "Devoto method," is given as the best, and is the one here used. The principle lies in the exclusion as far as possible of all other albumins. It is as follows: Take 200 to 300 c.c. of urine, to which add pure crystals of ammonium sulphate in proportion of 80 grammes of the sulphate to 100 c.c. of urine. This solution is placed in a beaker in a boiling-water bath for one-half an hour, when the greater part of the salt should be dissolved. It is then steamed in Budenberg's steam sterilizer for another half hour, the vapor being kept at 100° C. By this procedure, all proteids (serum albumin, globulin, hæmoglobulin, deutero-albumose, peptone, nucleo-albumin—*i. e.*, mucin) are precipitated; but the serum albumin and globulin and nucleo-albumin are thus the only *thoroughly* coagulated bodies, the hæmoglobulin being only *partly* coagulated.

After this last heating to 100° C. filter at once. The filtrate should be straw-colored and free from albumin, as indicated by boiling or the potassium ferrocyanide†† tests. A *slight* cloudiness appearing with the ferrocyanide test does not necessarily imply the presence of albumin. A *decided* turbidity or precipitate would be due to a proto-albumose, or, more probably, hetero-albumose. Should the hot filtrate be cloudy or give the proteid reactions, the investigation has miscarried and must be repeated from the beginning. The residue is washed first with *hot*, then with cold water. The resulting filtrates show a more or less decided brownish tint. These are collected, and to one portion of the fluid acetic acid and potassium ferro-cyanide solution are added to test for albumin. Should no result be obtained the biuret test is performed with a portion to which caustic soda or other alkali has been applied in excess. Any albumin shown to be present is *certainly* peptone.

The filtrate from the *hot* washings may exhibit it, but it often happens that the peptone *first becomes recognizable with the biuret test* in the filtrate derived from the *cold* washings.

Several specimens, both of the hot and cold washings, may be tested until a positive result is obtained.

The test for peptone is, therefore, at best very delicate and requires much time to work out. The biuret reaction is that by which the color test (for such it is) for the peptone is obtained, as inferred from the above. It is as follows. Urine: Add caustic potash, caustic soda, or ammonium hydrate in excess; then add, drop by drop, solution (10 per cent.) of copper sulphate. If *albumin* be present the resulting peroxide of copper (a green precipitate) is dissolved, and the fluid assumes a *reddish-violet* color.

Peptone strikes red, not violet, in the fluid. As this reaction is probably not familiar to many, the color produced is here exhibited (and in a less intense degree than it is usually found in peptonuria experimentation) by adding albumose, containing peptone, to the test.‖

The test for indican is much more simple, and, as given by Strümpel,§ is as follows: "We mix equal volumes of urine and officinal hydro-chloric acid (P. G.), and then add, drop by drop, a concentrated solution of chloride of lime, shaking it after each drop is added. If the urine contains *much* indican, a decided indigo-blue color appears." To this may be added, that the test can be brought out more clearly, chloroform, then agitating. After standing, it will be found the chloroform at the bottom of the tube will be colored violet or bluish.

2. Origin of Peptone.—In health peptone is produced in the blood by the act of digestion. We know that the proteids ingested are transformed into peptones in the stomach and intestines. The peptone is reconverted into proteids in the circulation. Peptonization is, therefore, the *sine qua non* for absorption of proteids. In health the peptone is immediately transformed on entering the blood, hence the reason for the statement of physiologists that "peptone is not found normally in the blood of urine."

The occurrence of peptones in the blood

† Clinical Diagnosis, p. 255.

†† This test is as follows: Urine if filtered and then acidulated with acetic acid Then add a few drops of a 10 per cent. solution of potassium ferrocyanide. If the urine becomes turbid it shows presence of albumin.

‖ Showed test-tube with reaction.

§ A Text-book of Medicine, p. 408.

or urine in disease would show over-production or a lessened power of the system to assimilate it.

G. Bjorkman's‡ excellent paper throws out some suggestions as to the rationale of peptonuria. He says: "If we regard the chemotactic influence upon absorbed peptones as the reason for such increase in the number of white corpuscles during digestion, many obscure mysteries in the physiological phenomena of absorption will be cleared up."

From the above statement we can infer that an excess of peptone, because the digesture and absorptive power of the white blood-cells are impaired, is carried off as waste in the urine.

The leucocytes multiply for defence in septic and other hæmolytic cases, and some become pus cells, undergo degeneration and furnish increased peptone in the blood, which is then carried off in the urine.

3. ORIGIN OF INDICAN—Indican is found normally in the urine in small amounts. Chemically indican is indoxysulphate of potassium and is colorless, but on adding strong acids or oxidizing agents indigo is set free, producing a blue color.

Its origin in health is hardly established.

In disease indican is likely formed from indol, a product formed in the small intestines by the decomposition of albumin and other substances under the influence of bacteria.

4. CLINICAL SIGNIFICANCE OF PEPTONURIA (*i, e., excess of Peptone.*)—As before stated, peptone is not found normally in the blood or urine. It cannot, at least as yet, be detected so frequently or easily in any case as serum-albumin. Peptone is especially found in the urine, according to von Jaksch and other authors, in septic conditions, and under all circumstances where pus is formed in the body—*e. g.*, tubercular cavities, as in the lungs, abscesses, etc.

Von Noorden, however, in his recent work, *Lehrbuch der Pathologie dis Stoffwechsels* (Berlin, 1893), does not think peptone is found in the urine. On the other hand, Robitschek has recently done some experiments for von Jaksch. An abstract of their work appears in *The Practitioner* for June 4. These authors lay stress upon "*The Significance of Peptonuria.*"

"‡The Physiological Role Played by the Leucocytes," American Medico-Surgical Bulletin for January, 1894.

5. CLINICAL SIGNIFICANCE OF INDICANURIA (*an excesi of Indican*).—Osler* gives, under the head of "Anomalies of the Urinary Secretion," some eighteen substances that may be found in abnormal urines. Some of these are detected in small amounts in health; others being considered always as abnormal, so far as is known to-day. He further states that indican, when in excess in the urine, often denotes "chronic constipation or ileus."

Strümpell† refers to the same thing, as does one of the authors.§ Indican is also said to exist in some cases that are not on a strict milk diet; in wasting diseases, especially if secondary to gastro-intestinal diseases; in peritonitis and empyema, and especially where large quantities of albuminous matter are undergoing rapid decomposition in the intestinal tract. On the contrary, in catarrhal jaundice and in cirrhosis of the liver some clinicians say it is found in very small amounts only. Indican may be thrown down before the urine is voided, but usually, when present, is found after that secretion cools outside the body.

The following observations here tabulated,‖ as to peptone, indican, albumin, and uric acid in the urine, of the total number of specimens examined are too few in number to base conclusions of a definite character. As to peptonuria and indicanuria, they support in the main the foregoing statements.

We were engaged at the time in studying the urine of cases of typhoid fever. We take this opportunity of presenting the results of the examination for peptone and indican in this disease. Thus in twenty-two experiments in twelve cases of typhoid fever, fair reactions for peptone were obtained in three cases only, while the indican test detected that substance in excess in sixteen out of the twenty-two tests.

In one of the three cases there was a large number of boils, which accounted for the peptonuria. In the other two no foci of suppuration could be found. Such focus was probably present.

CONCLUSIONS: 1. It can be said that peptonuria does not occur in typhoid fever

*The Principles and Practice of Medicine, pp. 772 to 777.

†A Text-book of Medicine, p 408.

§Medical Diagnosis, p 331.

‖Showed detail tables as to peptone, indican, albumin and uric acid findings in—I. Typhoid-fever cases (12). II. Miscellaneous diseases (33.) III. Known septic cases (12).

in the natural course of the disease.

2. Its presence would point to some area of suppuration.

3. Indicanuria is common to typhoid fever, and indicates the continuance of an intestinal putrefaction. May it not be possible in cases of typhoid fever, with a fibrile course continuing after the specific symptoms have subsided, to determine by this test whether the said fever is due to the persistence of intestinal lesions or to a remote process? and the absence of indicanuria, therefore, point to the removal of any intestinal complication?

The number of cases *other* than typhoid fever examined were forty-five. Many specimens were repeatedly examined as checks, making in all seventy-two tests, not including the typhoid cases.

We shall not burden you with the reading of the long tables here shown, but simply summarize the disease and findings under each head.

1. Cases With Absence of Peptone in the Urine.—There were twenty-one cases out of the forty-five cases examined in which no peptone reaction was found.

Five out of the twelve known septic cases contained no peptone in the urine. In two of these cases, of old well-draining tubercular sinuses, the pyogenic membrane probably acted as a dam, producing for practical purposes local diseases, not affecting the system, as a dyscrasiæ.

The one appendictis case (out of three tested) not having peptonuria was of mild type and recovered without event. There was no generalized morbid process.

Among the remaining cases where no peptone was found in the urine were those of various diseases in the medical wards, mostly doing well, such as corneal ulcer, supposed abscess of groin (proving on operation to be a dermoid cyst,) hysterical hemiplegia, septic stump, (making a rapid recovery,) hysterical hemiplegia, influenza, articular rheumatism (subacute,) bronchitis, hysteria, chlorosis.

Cases in which no Peptone was found in the Urine:

Appendicitis	1	Pneumonia (mild)	1
Bronchitis	1	Neurasthenia	1
Bright's disease (mild)	1	Rheumatism (articular)	1
Chlorosis	1	Rheumatoid arthritis	1
Catarrhal gastritis	1	Sciatica	1
Corneal ulcer	1	Septic stump (rapid recovery)	1
Epilepsy	1	Septic condition of groin (proved to be dermoid cyst at operation)	1
Hysterical hemiplegia	1	Tubercular bone disease	2
Hemiplegia (organic)	1		
Hysteria	1		
Influenza	1		
Pleural effusion (slight)	1		
		Total	21

2. Cases with the Presence of Peptonuria.—All the cases in which suppuration was known to be present had peptone in the urine except two. Of the two out of three appendicitis cases that showed peptonuria, one recovered; in the other perforation took place. Operation was done, finding much pus, the patient dying of septic peritonitis.

In all the forty-five cases (excluding the ten septic ones) peptone was found among the miscellaneous diseases (thirty-three) in twenty-four, such as Bright's disease, pneumonia, pyothorax, pulmonary tuberculosis, chronic valvular disease of the heart with extreme anæmia, pleural effusion and in such diseases where there was destruction of the *blood cells*.

Cases in which there was Peptone in the Urine:

Anæmia (extreme)	1	Pneumonia (severe type)	2
Acute general dermatitis	1	Pleural effusion (marked)	1
Appendicitis	2	Pyæmic or septic cases	
Bright's (chronic)	1	(out of the 12 examined)	10
Chronic valvular heart disease with anæmia	1	Typhoid (covered with boils)	1
Gelatinous arthritis knee	1	Tuberculosis	3
		Total	24

In the case of septicæmia with retained secundines in which there was also marked reaction for peptone there was extreme leucocytosis, the blood estimation revealing the following: white blood-corpuscles equals 49,966 to c.mm.; red-blood corpuscles equals 3,925,000 to c.mm.; hæmoglobin, 43 per cent. This is confirmatory evidence of what takes place in the blood in septic conditions. It may probably, *a priori*, be that leucocytosis is generally found to accompany peptonuria. With this cell disintegration, too, according to Victor Vaughan* and others, the corpuscle nuclei being destroyed furnishes xanthin and uric acid in excess in the urine.

3. Cases in which there was Little or No Indican in the Urine.—Out of the forty-five cases of miscelloneous diseases (thus still excluding the twelve typhoid already classified) formulation of the findings is as follows:

a. In thirteen diseases, including epilepsy, Bright's disease, hemiplegia, pneumonia, tuberculosis, and rheumatoid arthritis, indican was entirely absent or only the faintest blue color was produced which was then assumed as physiological.

*"Nuclein and Nuclein Therapy," Journal of the American Medical Association for June, 1894.

Cases in which there was Little or No Indican in the Urine:

Of the pyæmic cases, 4:	Abscess (buttock)	1
	Infected wound	1
	Tubercular bone disease	2
Miscellaneous, 13:	Amputated stump	1
	Arthritis (rheumatoid)	2
	Arthritis (gelatinous)	1
	Bright's disease	2
	Corneal ulcer	1
	Epilepsy	1
	Hysteria	1
	Pneumonia	1
	Neurasthenia	1
	Tuberculosis, lungs, (incipient)	2
	Total	17

4. CASES IN WHICH INDICAN WAS PRESENT IN VERY APPRECIABLE TO MARKED AMOUNTS IN THE URINE.—We found indican in twenty-five of the forty-five cases examined (excluding again the typhoids.")

In general the diseases included pleural effusion with intestinal catarrah, catarrhal gastritis, nervous dyspepsia, and all three appendicitis cases from a good to marked reaction.

Indican was also found in excess in the case of cancer of the uterus. When thus found in the urine in local cancer, indican may be of value as showing secondary nodules in the intestines, or at least deficient and altered functionation produced by the malignant disease.

Indican was also found in the urine of the case of sapticæmia from retained secundines. Here the close poximity of the focus of pus to the intestinal tract most likely was the cause of the fermentation in the gut.

We were unable to obtain any cases of intestinal obstruction for examination during the time of making these studies.

Cases with Indican present in Excess in the Urine:

Abscess (psoas and lumbar near intestinal tract)	3
Appendicitis	3
Acute dermatitis (bowels torpid)	1
Anæmia (extreme) with constipation	1
Articular rheumatism	1
Chronic valvular heart disease with subacute intestinal catarrh	1
Chlorosis (with constipation)	1
Cancer, uterus	1
Catarrhal gastritis	1
Dermoid cyst	1
Hysterical hemiplegia	1
Hysteria, anæmia, and constipation	1
Hemiplegia (organic) with constipation	1
Influenza	1
Pneumonia	2
Pleural effusion	1
Retained secundines with intestinal torpor	1
Sciatica	1
Tuberculosis	1
Typhoid (covered with boils and hence included in pyæmic cases)	1
Total	25

5. ASSOCIATION OF PEPTONURIA WITH INDICANURIA.—The two were found together in a large number of the cases in which either compound was detected.

Peptone occurred, as stated, in the large majority of septic cases.*

Where there was extreme emaciation with intestinal symptoms as an especially prominent etiological factor, indican was found in the urine in excess.

The relation of indicanuria with pepionuria depends on two things mainly:

a. If the septic or other irritating condition is localized in the gastro-intestinal tract marked indicanuria is detected.

b. If the general system becomes involved in the albuminous compounds, destruction, then peptone is formed in excess in the blood and hence thrown down in the urine along with the excess of indican.

Petone depends on changes really in the system.

Indican depends on fermentations really outside of the body (*in the gut*).

Thus depending on *general* cell destruction and elimination of the suboxidized proteid product, or on *local* intestinal fermentation being prominent, will peptone or indican be found in excess in the urine.

If the *local* and systemic conditions exist together as described, then we may expect to find both products in the urine. Then, too, the indication is of more serious disease.

6. ASSOCIATION OF ALBUMIN WITH PEPTONURIA AND INDICANURIA.—In the specimens of urine in which albumin was found, it was due to a definite cause, as in Bright's disease or pyuria, hence in these experiments albuminuria bore no relation to peptonuria or indicanuria.

7. Likewise there is negative result in these few experiments in comparing the frequency of excess of uric acid with excess of peptone or excess of indican in the urine. The long-accepted theory of direct relation between uric acid and urea is now overthrown.

It would be, therefore, of value to test more extendedly for the relation of uric acid (know now to be produced from cell nuclei destruction) to peptonuria and leucocytosis. A great field is open here.

Finally, the trouble and time taken to this work thus far proves it not to be very practical.

But if one *had* the opportunity and time for such investigation of cases important indications would undoubtedly be derived.

*The liability to inaccuracies in the work *creeping in* must be considered in excluding peptonuria from two septic cases.

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SATURDAY, JULY 21, 1894.

EDITORIAL.

DISCUSSION ON HERNIA AT THE LATE MEETING OF THE AMERICAN MEDICAL ASSOCIATION.

An elaborate programme had been prepared for the Surgical Section of the American Medical Association at the San Francisco meeting, in which the subject of hernia was designed to take a prominent position.

The plan of providing a number of formal papers upon a specified subject and the selection of those who are to be prepared to lead the discussion, will commend itself to all. It must be conceded, however, that in this discussion on hernia the results have been disappointing.

Many of the papers were read by title only; and most of the contributions actually presented showed signs of the hasty performance of a perfunctory duty, without such care and preparation as the dignity of the occasion demanded. Almost nothing of statistical value was produced.

The most creditable and practical essay presented, was that of Dr. Joseph Ransohoff, of Cincinnati, on the "Treatment of Strangulated Hernia." This paper, an abstract of which appears elsewhere in the REPORTER, will amply repay careful study.

The writer advises early operation in all cases of strangulation, and shows that in a large number of mortal cases, death was induced by causes preventable through early operation. This timely contribution is a painful reminder that despite the vaunting of enthusiasts on abdominal surgery, it remains an open question whether or not of late years any substantial progress has been made in the surgery of the intestine. For instance; McCosh is represented as placing the mortality of artificial anus for gangrene of the bowel at 50 per cent; Renno Schmidt gives a mortality of 85 per cent. for resection of the intestine; and of 168 cases of gangrenous intestine, Mikulicz reports 109 deaths.

Dr. Ransohoff believes that an operation for strangulation is not in itself dangerous to life. The diminished mortality of more recent years, he thinks, is due largely to an early interference, and the mortality may be further reduced by avoid-

ing such causes of death as heart failure and pneumonia, by the substitution of local for general anæsthesia. He says:

"With my present knowledge, the deaths from heart failure and pneumonia might have been averted by substituting cocaine for general anæsthesia.* * * * In a case recently seen, I made the relief-operation, removing a mass of the omentum as large as a walnut, and returned the intestine without inflicting enough suffering to elicit a moan."

This point is not sufficiently emphasized. Manley, in his recent work on hernia, recommends cocainization as a local anæsthetic in operation for all cases of strangulated hernia, claiming thereby a reduction of operative mortality to nil, unless the bowel is actually gangrenous at the time of intervention. Indeed Manley claims something more than pain-killing power for cocaine in operations for strangulated hernia, for he alleges that it prevents vomiting, acts as a local hæmostatic, and makes the surgeon so master of the situation that he needs no assistance other than that the patient himself can provide.

If the local use of cocaine in strangulated hernia is what Manley claims for it, its general adoption in this class of cases will constitute a very substantial advance in the operative treatment of this condition.

It is unfortunate that even this phase of the subject did not receive more attention at the California meeting; for if local anæsthesia provides safeguards to life, and is without immediate or ultimate peril, it should be made known to the profession, and be at once adopted in all suitable cases in which hernia becomes complicated and menaces life.

ABSTRACTS.

NATURAL SANITATION.

The natural conditions which should be incident to the life of human beings, conducive to long and healthful life are:

a. Breeding from parents free from physical or mental taint.

b. Feeding the infant upon the mother's milk.

c. Higher regard for the physical than mental training of youth.

d. Pure air, pure water, pure food.

f. Wearing loose clothing.

g. Natural sleep and plenty of it.

h. Natural labor—physical or mental unforced.

i. Dwelling house free from filth, having free access of sunlight and air.

j. Use of earth closets.

k. Prompt elimination of effete matter from the body, by the lungs, skin, bowels and kidneys.

l. Frequent washing of the body.

m. Frequent change of all articles of clothing.

n. Burning of the dead.

o. Exercise of passions within natural prompting.

p. Constant occupation, physical and mental.

INSANITATION.

The unnatural conditions incident to human life which are conducive to ill-health, disease and early death are:

a. Habits peculiar to the higher modern civilization in its influence upon both body and mind. Cultivation of luxurious living rather than following natural instincts.

b. Inheritances by breeding from parents who are physically and mentally tainted with disease, such as syphillis, consumption, rheumatism, alcoholism. Low physical development, malformations. Insanity or mental bias. Marriage between those of near family relationship.

c. Impure air. Bad ventilation, in sleeping, work, school or lecture room. Theatres, halls, churches, sleeping cars, railway, day or night ordinary passenger cars. Palace cars. Depot waiting rooms. Hotel sleeping or dining rooms. In water closets, sewers and privies.

Impure air in these places arises from expired air from the lungs and the effluvium from the skin, loaded as it always is with effete matter.

Air becomes impure from the floating dust arising from dried filth, which includes the spittle and phlegm of diseased human beings and animals. The eliminated excrementitious and effete matter from the animal or human body. From decayed rotting or fermenting waste of a vegetable or animal nature. These influences are incident to every place inhabitated by animals of high or low degree, including man, and the palace as well as the hovel may be tainted.

d. Impure water which becomes so by contact with the following influences:

Human and animal excreta, surface deposit, or in privies, cesspools, and sewers.

Kitchen refuse, bath tubs, laundries, slop water, garbage, decayed vegetable matter on surface of ground or in water. Barnyard, stock yards, pig-pens, cow and horse stables, graveyards.

Vegetable acids from soaked leaves, branches and roots of trees and bushes on water shed.

Artificial and natural manures, washed from agricultural fields on water shed.

Swamp scum and fungus growths, swamps, stagnant pools, marshy bottoms.

Low stage of water in tributaries on the water shed.

Turbid water from canals and stagnant pools.

Dead animals, fish and spawn in water, or on the surface of the water shed.

Street and road drainage, public markets, slaughterhouses, putrescent impurity from decaying animal tissue, blood and excreta.

Tanneries.—Refuse, decayed animal tissue and chemicals from the process. Sulphuric and tannic acid, bark, liquors, etc.

Creameries.—Fermenting refuse from process of cheese and butter-making.

Malt liquors, breweries, alcoholic liquor distilleries, refuse fermenting vegetable matter for them.

Paper mills, chemical pollution from lime, chloride of lime and alum, caustic alkali, etc.

Pollution by chemicals, grease oils, spent liquors, etc., wasted from dye works, chemical works, woolen works, cotton works, soap works, gas works and wool washers.

Sulphate of iron and oil of vitriol from iron and wire mills.

Drainage from coal mines, coal yards, railroads and locomotive houses.

Oil wells, natural gas wells, iron mines, bog iron ore, lead mines, lead pipes, sulphuric acid, tannic acid, lime, sulphate of lime, carbonate of lime, magnesia, salt and chlorine.

To the above may be added under the general head of sewerage, anything and everything which pertains to, and is incident to human and animal life, manufactories, trades, professions and sciences, and denominated refuse or waste.

It may be stated as a general proposition, that all waters taken from a water shed which is inhabited by human beings under the most modern state of civilization, are more or less contaminated by one or more of the various causes which have been stated.

It may also be stated as a general proposition, that all waters in a natural state, whether proceeding from the clouds as rain, or coming from the earth, contain impurities which are injurious, subject to such exceptions as may be peculiar to certain conditions and environments.

e. Communicable Diseases:

1. Insanity; syphilis; rheumatism; consumption; physical debility; alcoholism; mental bias in favor of immorality; various manias not amounting to insanity; physical deformity and nervousness.	By bad breeding, through inheritance.
2. Small-pox, scarlet fever, measles, whooping cough, skin diseases, diphtheria, puerperal fever, yellow fever. Vegetable and animal parasites and vermin.	By contract with the diseased, their clothing or surroundings. By dust arising from diseased scurf and dried effete matter from the body.
3. Typhus fever, typhoid fever, cholera, dysentery, inflammation of stomach and bowels.	By contact with filth, by water, milk or other liquids and food containing the germs of the disease.

f. Mental and nervous diseases of various types. Caused by grief, worry, anxiety, disappointment, shock from sudden joy or sorrow. Wounds: chronic diseases, inherited or induced by alcohol, morphine, opium, tobacco, coffee or tea. Diseases peculiar to the female sex. Fanaticisms, religious excitements. Physical vices or worry incident to commercial and professional life.

Of the foregoing influences which cause conditions which are at war with sanitation the most serious may be mentioned as follows:

Impure air, water and food. Filth, uncleanliness. Bad breeding. Consumption. Diphtheria. Fever of various kinds mentioned. Improper disposal of excreta, of diseased tainted clothing and furniture, and insanitary disposal of the dead by burying in the ground. Careless contact of persons one with the other, who are under the influence of disease, by association, or in any other manner. Alcohol and narcotic poisons.

Such are the conditions incident to insanitation the world over.—*W. H. Barnes, Esq., in Dietetic and Hygienic Gazette.*

SOCIETY REPORTS.

THE LOUISVILLE CLINICAL SOCIETY.

March 13, 1894.

[STENOGRAPHICALLY REPORTED BY C. C. MAPES.]

UTERINE FIBROID.

DR. W. H. WATHEN: This tumor was removed from a lady thirty-four years old, from Bowling Green, on last Thursday. She had suffered from its effects for several years, and for two years had profuse menorrhagia and metrorrhagia. She had been treated by some of the best physicians of the State without improvement, and had finally become so anæmic and feeble that her physician did not think it safe to allow the case to go longer without surgical interference, and referred her to me. Her pulse was 110, and she weighed about ninety pounds. An examination of the urine showed that the kidneys were performing their functions properly, and with the exception of extreme anæmia and a rapid and feeble pulse she was in a good condition for operation.

This tumor weighs about ten pounds and is nearly the shape of a generally enlarged uterus. The tumor had not formed adhesions, but was intraligamentous, having unfolded the broad ligaments out to their attachment to the pelvis, so that it could not be brought through the abdominal wound because held down tightly and wedged in the pelvis. Ligation was begun at the top on one side, then on the other, dividing off the broad ligaments, when the tumor could gradually be elevated. I ligated as close to the pelvis as possible and clamped close to the tumor with hemostatic forceps. The peritoneum was stripped down in front and behind, and by this means a pedicle was formed. I intended to ligate the uterine arteries and extirpate the entire uterus, or leave the cervix covered with peritoneum, but when the neck was well formed I saw it could be very easily brought into the wound and treated extra-peritoneally, and, as the woman was in feeble health, any delay might have proven serious. So I used the *neude* and treated the pedicle by the extra-peritoneal method. The peritoneum was stitched closely around the pedicle below the wire with catgut, the incised peritoneum closed for the entire length with catgut, and the abdominal incision united by silk-worm gut sutures introduced down to the peritoneal layer. There was no shock, and the anæsthetist reported the patient's pulse better when the operation was completed than when she went on the operating table. She had some pain during the afternoon, and the nurse gave two hypodermic injections of $\frac{1}{8}$ grain morphine. Aside from that she has had no trouble, has been apparently in a normal condition, pulse and temperature good, passed gas

freely within twenty-four hours after operation, bowels move daily and she is convalescing nicely. I will not change the dressing for two days.

I prefer the intra-peritoneal treatment of the stump or total extirpation where there are no conditions that indicate that the extra-peritoneal method would be safer. The extra-peritoneal method is the simpler method and quicker in many cases. In two cases recently operated upon, I used the intra-peritoneal method, ligating the uterine arteries and leaving the stump.

I am sure there will never be a time when hysterectomists will adopt any one method of treating the pedicle to the exclusion of all others.

DISCUSSION.

DR. W. O. ROBERTS: In applying the *neude* was it necessary to separate the bladder or rectum from the tumor?

DR. W. H. WATHEN: An examination before operation showed the bladder to be low, and in operating it was not in the way. The tumor was not adherent to the rectum.

DR. A. M. CARTLEDGE (Visiting): I am like Dr. Wathen. I think the supra-vaginal method the best in treating such cases. An operation of this character ought to be done very quickly. I would like to ask the reporter how much time was consumed in applying the *neude* and removing the tumor.

DR. W. H. WATHEN: The time required for that part of the work was about thirty minutes.

DR. A. M. CARTLEGE: Supra-vaginal operations like this where there are not a great many adhesions ought to be completed in forty to forty-five minutes. I have certainly done several such operations in that length of time, and this seems to me to be an ideal tumor for that procedure. In two or three cases I have had the trouble indicated by Dr. Wathen, an unfolding or infolding of the broad ligaments, and I remember one case where I actually removed such a tumor without opening the general peritoneal cavity. I always follow up and ligate first the ovarian then the uterine arteries. I think the best plan is to ligate these arteries direct and not include the broad ligament as is usually done. That is instead of transfixing the broad ligament and applying a ligature to the artery including the broad ligament, you ligate each separately, cutting down to the cervix itself which is a matter of but a few minutes. By this means hemorrhage is absolutely controlled; in fact, where this method was employed I have never seen any hemorrhage, but where both the broad ligament and artery are included in the same ligature owing to the contraction of the structures, the ligature is liable to become loosened and serious hemorrhage might occur. This method of ligation is applicable to any of the three methods of operating, total extirpation, supra-vaginal and extra-peritoneal.

I remember the first time I did this operation the time consumed was one hour and fifteen minutes, but that was in a very complicated case with extensive adhesions. I am sure in most cases it can be done in forty-five minutes.

DR. W. H. WATHEN: This was not on easy tumor to remove, for the reason that there were practically no broad ligaments to work upon. Only a small portion of tissue could be included in each ligature and the ligaments had to be cut so near the tumor that there was difficulty in controlling hemorrhage from the uterine side. Where there is unfolding of the broad ligaments, this difficulty is encountered. With a tumor that can be brought well up out of the pelvis, where there is no unfolding of the broad ligaments, the operation is very simple. In some instances it is only necessary to apply two ligatures to include the arteries upon each side; the first for the ovarian artery, the second for the uterine artery, but in the case reported, before getting down to the pedicle, it was necessary to ligate section after section. Six ligatures were used upon each side of the tumor, which made the operation difficult and tedious.

Dr. L. S. McMurtry read a paper entitled

OVARIAN TUMORS.

(See page 42 last week's REPORTER).

DISCUSSION.

DR. W. O. ROBERTS: I agree with what Dr. McMurtry has said with reference to the diagnosis of abdominal tumors. It is impossible in many cases to make the

diagnosis, as he states, without an exploratory incision. I do not suppose there is an operator living who upon opening the abdomen has not found conditions to deal with that he had not expected. As the essayist has said so simple a thing as ovarian tumor has often been mistaken for a great number of troubles. At the last meeting of this Society I reported a case of very large multilocular ovarian tumor that had been mistaken by a number of competent physicians for extra-uterine pregnancy; one went so far as to say that he believed he had felt the the movements the child. It turned out to be simple multilocular cyst. On one occasion I remember to have opened the abdomen for ovarian tumor and found as Dr. McMurtry states he did on one occasion, a large cyst of the kidney. I have operated for removal of the spleen, and found the trouble to be a tumor of the kidney. As he states also I do not think it makes much difference as to the length of the incision that we make in the removal of these tumors. My rule is to always make the incision sufficiently large to give an abundance of room.

In reference to uterine myoma: I can recall quite a number of women who had myoma of considerable size, extending up to the umbilicus, and half or nearly all of them have disappeared at the menopause. I examined a lady a short time ago who had a tumor of this kind extending above the pubes—she was also seen by Dr. Marion Sims in 1875, at the time the *American Medical Association* met in this city, and an operation was discussed at that time. Dr. Sims strongly advised against any operative procedure. In the examination a short time ago the tumor was found to have almost entirely disappeared. There is another lady in this city, a nurse who had a myoma of the uterus of considerable size extending almost up to the umbilicus. A number of the gentlemen present know the woman. Since the menopause it has almost entirely disappeared.

As regards the operation of removal of the appendages in the treatment of uterine myoma, I suppose all of us can recall numbers of cases where we have done the operation with marked success. I do not know of a single instance in which I have removed the appendages where the tumor has failed to shrink away. I do not remember to have lost a patient from an operation for this condition. I think where the tumor has not attained a very great size, and where it is not producing any trouble from pressure that the simpler operation of removal of the appendages ought to be tried before total extirpation is done.

In the operation of hysterectomy, I agree with what Dr. McMurtry has said that the operation mentioned by him, the one employed in the case he reported, is decidedly the simplest and safest of any method that I have seen. I have never done the operation of amputation through the cervix and leaving the stump inside. I have always done the operation mentioned by Dr. McMurtry—extra-peritoneal treatment of the stump—and so far prefer it to any other.

Dr. W. H. WATHEN: There can be no question about the propriety of removing ovarian tumors; it matters not how small they may be. It is fortunate that women who suffer with these tumors now solicit professional advice early and have the tumors removed before complications have arisen that would endanger life. Ovariotomy, where the kidneys are healthy, and the system is in good condition, unless some unusual complication should arise, ought to be almost universally successful in the practice of any one who has experience with the best technique in abdominal surgery. For more than two years I have met with so little trouble in ovarian tumors, that they give me less annoyance than any other form of tumor in the abdominal or pelvic cavities. The diagnosis of ovarian tumors, especially when small, cannot always be made accurately, but with the exception of fibroid tumors of the uterus they are probably more easily diagnosed than any other form of abdominal tumor. I have several times made a diagnosis of ovarian tumor but when the abdomen was opened found a par-ovarian cyst. Six months ago I removed a par-ovarian cyst which weighed fifty pounds. In this case I had made a diagnosis of ovarian tumor. Three months since I removed a twenty pound par-ovarian cyst from a girl eighteen years of age which I had diagnosed ovarian, and in several cases within the last two years I have found par-ovarian cysts where I have diagnosed ovarian tumors. On two or three occasions I have found large intra-ligamentous cysts, where I had diag-

nosed ovarian tumors. It is usually impossible to make a differential diagnosis between these cysts and the ordinary ovarian tumors until the abdomen is opened, nor is it important for they should all be removed.

In regard to fibroid tumors, I do not think we should be governed as much by the size of the tumor as by the symptoms. A tumor of considerable size may cause no symptoms that seriously interfere with the woman's health or happiness. A small fibroid may cause symptoms that demand removal of the tumor, and this should be our guide mainly in the extirpation of these tumors. I agree that fibroid tumors are frequently removed where there is no necessity for it; other operators may refuse to remove a fibroid when operation for its removal is imperatively demanded. I do not think anyone ought to undertake to do an hysterectomy who has not seen this work done and is thoroughly familiar with its technique, because while one hysterectomy may be a simple operation, the next may be one of the most difficult operations in abdominal surgery. To do this work a man should be a skillful operator, and should be prepared to treat any emergency or condition that may arise.

I have not had much experience in the removal of ovaries and tubes in the treatment of fibroid tumors. I remember one case upon which I so operated four years ago. The woman was suffering so much that something had to be done. The tubes were seven inches in length and large; the ovaries were four times the normal size but not cystic. She made an uninterrupted recovery, not only from the operation, but all symptoms were relieved. I saw the woman less than two months ago, and there had been no return of the symptoms; the tumor has decreased very much in size. I know of many cases where the tumors have decreased in size without treatment, and all symptoms have disappeared. I remember one case, the patient being the mother-in-law of a prominent lawyer of this city, who consulted me five years ago, and I recommended operation. She declined and went to Chicago and was treated by Dr. Martin, and while there was no immediate improvement, on her return to Louisville all the symptoms gradually disappeared and she is to-day apparently in perfect health, with the tumor very much decreased in size. So I repeat that it is not so much the size of the tumor that should govern us in our operations but the symptoms. As I remarked in presenting this specimen, concerning the three methods of treating the pedicle—the extra-peritoneal, intra-peritoneal and total extirpation. It depends upon the conditions that you have to deal with at the time, the fondness of the operator for one method over another and his expertness in doing the operation.

Dr. Cartledge spoke of ligating the arteries separately; that is a very good method, but I believe the operation can be done more rapidly and better by not doing so unless we do total extirpation. In the intra-pelvic but extra-peritoneal treatment of the pedicle the ligation of the uterine artery by including both layers of the broad ligament in the ligature will often bring peritoneal surface against peritoneal surface, thereby removing the necessity of suturing the flaps over the cervix. The fewer ligatures used in these cases the better.

Dr. J. W. Irwin: What percent of fibroid tumors are found maligant?

Dr. W. H. Wathen: It has not been proven that a fibroma has degenerated into a carcinoma, but its presence may constitute a *locus minoris resistentiæ* determining a local diathesis. With fibromata there is often a chronic glandular endometritis, which causes proliferation of the glands, at first typical, passing into the atypical or malignant. The round cell sarcoma may develop in the frame work of a fibroma and destroy the muscular fibres; and there may be a sarcomatous fibro-cyst—cancer may invade the uterus by the side of a fibroma; and cancer of the cervix is often associated with fibroma of the body.

Dr. A. M. Cartledge: I can hardly agree with Dr. McMurtry as to the incision: I believe the smaller the incision we make and yet allow thorough work the better. This applies to ovarian cysts as well as other abdominal tumors; it is possible to remove a very large cyst having several compartments, through a small incision. Of course we may go to the extreme in either direction, and I believe the incision should be governed entirely by the condition with which we have to deal, making it as small as consistent with thorough work. I do not mean to underestimate the importance of an incision suf-

ficiently large through which to work with ease, and where there are extensive adhesions the incision should be large enough to admit of thorough and perfect surgical work.

Dr. Wathen's point in regard to ligation is well taken except for one fact. We must remember that the greatest danger from hysterectomy is hemorrhage. While it may be true that the fewest possible number of ligatures should be inserted in the abdominal cavity, yet I believe his method of ligation is one of the bad points about his operation. In the enucleation of a fibroid tumor of the uterus we have the danger of hemorrhage from the ovarian and uterine arteries, which if it occurs may be very difficult to control. In forming the pedicle of such a tumor it is largely composed of muscular structures and great care should be taken in the ligation. I take the position that the arteries in this situation should be ligated separately, because if included with the pedicle or broad ligament, the liability of the ligature slipping owing to contraction of the muscular structures after the anæsthetic is eliminated, is very great. In separate ligation this danger is reduced to a minimum; when the ligature is applied direct to the uterine artery for instance it cannot slip, and therefore becomes perfectly safe.

DR. W. H. WATHEN: Dr. Cartledge is mistaken about the danger of the ligature slipping when passed through the peritoneal fold, because it is impossible for it to slip if applied in the manner I have suggested. The only danger is in failing to include the uterine artery in the ligature. If care is taken to include the artery, and the ligature is sufficiently strong it may easily be drawn tight enough to control hemorrhage. Dr. Cartledge magnifies the danger of hemorrhage after hysterectomy. Statistics show that there are very few recorded cases of fatal hemorrhage occurring after these operations, where the uterine arteries have been tied by any of the prevailing methods. Some fatal cases are reported, but most of them occurred years ago, and the fault was in the ligation of the pedicle itself composed of the neck of the womb, a method which no one would practice now because it is unreliable in controlling hemorrhage, and predisposes to sepsis by causing sloughing of the neck.

DR. A. M. CARTLEDGE: In the ligation of any blood vessel, it is important that the ligature be applied directly to the vessel; the more tissue included the greater the liability to hemorrhage.

DR. L. S. MCMURTRY: I am greatly pleased that the subject has received such marked attention and discussion by the Fellows of the Society. I have seen several cases of fibroma where hysterectomy was done several years after the appendages had been removed. At the hysterectomy the stumps where the appendages were removed showed that the operation had been thoroughly done, but the tumor had continued to grow. As a rule removal of the appendages in the early stage of fibroid growths of the uterus, is a very satisfactory operation. The appendages are nearly always found to be diseased. As stated in my opening remarks, and as has been demonstrated in the discussion, the great interest in the subject centers around the dangers of the operations, not from shock but from hemorrhage. I believe an investigation of the subject would show that a great many of the deaths following hysterectomy reported as resulting from shock, are really due to hemorrhage. If the abdomen were opened it would be discovered that bleeding had taken place from the stump treated intra-peritoneally. The stump of a fibroid tumor is composed of contractile muscular tissues, and is a very dangerous stump to leave in the pelvis. I have seen a number of cases in the practice of others where there has been an intra-peritoneal stump which was followed by serious trouble weeks afterward from abscess of the stump. After you tie the uterine arteries you cut off the greater part of the blood supply to the stump, and it is very liable to undergo necrotic changes.

One of the gentleman present has called my attention to the fact that in speaking of ovarian tumors I said nothing about tapping. The dangers of this procedure are so well known it is scarcely necessary to say anything about it. Invariably after tapping there will be more or less inflammation and adhesions.

The Advantages of Pental.

Phillips (Zeutsch. fur Kinder.), judging from an experience of 1,000 narcoses in the Kaiser Friedrick Hospital, Berlin, makes the following statements concerning the advantages of pental over chloroform.

(1) More rapid narcosis.
(2) Absence of or shorter period of excitement.
(3) Quick recovery.
(4) Absence of after effects such as are common with chloroform.
(5) Cyanosis rarely appears, and is then due to tonic contraction of diaphragm and glottis.

CURRENT LITERATURE REVIEWED.

IN CHARGE OF ELLISTON J. MORRIS, M. D., AND SAMUEL M. WILSON, M. D.

THE AMERICAN JOURNAL OF OBSTETRICS

For June contains a paper by Dr. George H. Rohe on

Hematoma of the Ovary.

The view that these are caused by an excessive hemorrhage into the Graafian follicle after rupture and escape of the ovule, seems to the author not tenable. The reasons given by him for rejecting this theory are that in many instances no rupture of the follicle has taken place. Besides, the corpus luteum frequently contains no blood. He believes that hematoma of the ovary, no matter how small, should be looked on as a pathological formation, having no essential connection with the process of ovulation. The cause he thinks is due to some nutritional change in the ovary or the blood vessels. The author does not look with favor on the conservative proceding of extirpating the hematoma and stitching up the wound in the ovary, but believes that the entire ovary should be removed, as he has always seen in these cases complications that require the removal of the ovary. He reports the case of a woman in the insane hospital in whom the removal of both appendages, one of which contained a hematoma and the other a cyst, resulted in complete restoration to health.

In conclusion he says: A hematoma may rupture and give rise to a pelvic hematocele. In other cases the bleeding may continue and the patient die of hemorrhage. The most serious danger from rupture is peritonitis or sepsis. The diagnosis of ovarian hematocele cannot be definitely made before abdominal section. Even when rupture occurs and a hematocele is formed the diagnosis rests between several conditions, often differentiated with difficulty, even after operation.

The only rational procedure is removal of the affected organ by abdominal section.

Dr. J. H. Carsten contributes a paper on

Cæsarean Section

in which he sums up his conclusions as follows:

1. In certain cases with an antero-posterior diameter of three inches craniotomy is justifiable.

2. With an antero-posterior diameter of less than three inches, Cæsarean section should be performed.

3. In the latter cases sometimes the classical; sometimes the Porro-Cæsarean section should be preferred.

Dr. J. E. Oldham discusses the subject of

Ectopic Gestation,

reporting several cases. The author favors the use of electricity. His manner of using galvanism was with a large clay electrode applied to the abdomen, and an ordinary vaginal electrode, wrapped with absorbent cotton, introduced into the vagina well under the tumor. The abdominal electrode was connected with the positive, and the vaginal electrode with the negative side of the battery.

In the first case reported, the course was so rapid that a positive diagnosis could not be made prior to the time of rupture, and that occuring into the peritoneal cavity, the hemorrhage was fatal. In the second case faradic electricity failed to destroy the vitality of the fetus, after a most thorough trial. In the third case galvanism used as stated did destroy the vitality of the fetus, and this case illustrates the fact the patients may conceive and bear children after the occurrence of ectopic gestation. The fourth case illustrates and bears out the statment of Pozzi that "internal suppuration may occur in the sac long after the contents have become encysted and rendered apparently an inert mass." The fifth case again demonstrates the efficiency of galvanism. In the sixth case galvanism was not effective, but whether on account of the intollerance of the patient to bear a current of sufficient strength, or whether from the advanced state of the pregnancy, the author is unable to say; he is inclined, however, to the former opinion.

Dr. Mary A. Dixon Jones contributes a paper on

The Minute Anatomy of the Fallopian Tubes,

suming up the result of her researches as follows:

1. In the tube-wall are six layers of smooth muscles. The two main layers are the circular and the longitudinal. These interlace, the circular has the broader area and is nearer the calibre; the longitudinal is nearer the peritoneum.

2. The inner surface of the tube-wall is made up of myxomatous or myxo-fibros connective tissue, which in turn is supplied with two muscle layers, a broader longitudinal and a narrow circular, both interlacing

3. The mucosa has folds with many ramifications, serving for the occlusion of the calibre during life. These folds are the result of alternate contractions and extensions of the two muscle-layers of the mucosa, the transverse and the longitudinal, which are visible throughout all the folds and all the ramifications, arranged in bundles close beneath the epithelial layer.

4. Outside of the longitudinal layer of the tube-wall is the layer of blood vessels, mainly, arteries and veins, in an arrangement similar to that known to exist in the walls of the uterus.

5. Beyond the vascular layers are the two narrow layers of smooth muscle fibres, both being oblique, both traceable from the uterine ostium up to the fimbriated extremity of the tube, and they correspond to the two oblique layers of the wall of the uterus. The two ob-

lique layers are bordered outwardly by the peritoneum, and seem to serve mainly for the regulation of the afflux of blood in the subjacent arteries and veins.

6. The circular and longitudinal muscle-layers are antagonistic in their action. If one layer is contracted, the other is relaxed. Again, the two muscle-layers of the tube-wall proper are antagonistic in their action to the muscles of the mucosa. The contraction of the muscles of the tube-wall is accompanied by a corresponding relaxation of the muscles of the mucosa. Within the folds the primary, secondary, and tertiary ramifications are produced by alternate contractions of smaller portions of the muscle-layers of the mucosa.

Dr. J. Foster Scott discusses

The Pathology and Treatment of Periuterine Pelvic Inflammations.

While it is pretty generally accepted now that the vast majority of periuterine pelvic inflamations (aside from those following puerperal septicemia) are caused by peritonitis consequent upon tubal disease. The author thinks that the condition of pelvic cellulitis will still continue to be a recognized pathological factor in cases of infection following upon childbirth, abortion, or the introduction of virulent poisons into wounds of the upper vagina, cervix, or uterus.

In the treatment of this condition the author advises, if the condition originates from a septic endometritis, that the uterus be curetted, washed out, and a gauze drain introduced up to the fundus. In the acute or chronic forms, where suppuration has not occured, the patient should be kept in bed at absolute rest, and have morning and evening hot douches, prolonged for fifteen to twenty minutes. If the bowels or not filled with impacted feces, the author thinks it advisable to keep the patient well under the influence of opiates to quiet peristaltic action. Painting over a large surface of the lower abdomen with iodine should be tried, and the author is in favor of the application of six or eight leeches to the portio vaginalis. Ice-cold applications he regards as better than hot poultices; the latter, in his estimation, favor the growth of septic organisms and hasten suppuration, which might be averted by cold. If there is a gonorrhœal history, the utmost trouble should be taken to prevent its ravages by antiseptics applied to the inner surfaces of the uterus, even if it has spread there. Diet and tonics are needed. Pain is to be met with morphia suppositories and opiates; and the temperature kept down by sponging with cold water and alcohol, and giving aconite and antipyretics with judgment. Celiotomy will be required if suppuration has occured, and in cases of tubercular peritonitis the abdomen should be opened and flushed with hot water freely.

The remaining papers in this issue are:

"Contributions to the Histology and Histogenesis of Sarcoma of the Uterus," by J. Whitridge Williams, M. D.

"An interesting Case of Vaginal Hysterectomy, with Remarks on Carcinoma Uteri," by Angus MacKinnon, M. D.

THE ANNALS OF GYNÆCOLOGY AND PÆDIATRY.

for June. Dr. Reuben Peterson contributes an article on

Strangulated Unbilical Hernia.

In regard to the determination of the amount of injury the bowel has received by the constriction, he suggests that the injured segment be enveloped in hot sponges, after releasing the constriction and drawing the bowel out through the incision, and any changes of color in the bowel well closely observed. It should not be decided too hastily that the injury has been permanent, and that an artificial anus must be made. Even should there be dark, necrotic spots remaining after the circulation has returned to the major portion of the affected part, it must be borne in mind that these may be only superficial, and the underlying layers unaffected. Except in extreme cases, he thinks, five or ten minutes can profitably be spent in waiting and observing the re-establishment of the circulation or its failures, the patient in the mean time being kept lightly under the anæsthetic.

In regard to what operative procedures should be adopted when the integrity of the bowel is impared, he is of the opinion that an artificial anus and a subsequent resection will probably give the best results in the hands of those unaccustomed to intestinal surgery. In regard to the prevention of the recurrence of a strangulated hernia, he gives preference to no one method of operating but whatever method he adopted, the endeavor must be to accurately approximate the fascia transversalis. If this be accomplished and the wound heal by first inprimary union, the chances are largely against a recurrence of the hernia.

Dr. Herman E. Hayd discusses the

Treatment of Tubal Disease,

giving as his opinion that in acute septic or gonorrhœal endo-salpingitis, the most radical measures must be resorted to early, as these inflammations so rapidly cause total destruction of the tubes and adjacent structures. Therefore dilatation and curettement and uterine drainage, as provided for by Polk's operation, is advised as cutting short the endometritis and aborting the possible salpingo-ovaritis, by preventing further spread of the infection. In the more chronic cases, where the tubes and ovaries are considerably involved, and their component elements thickened and perhaps cystic and filled with serum, blood or pus, salpingotomy or salpingo-oophorectomy is the only hope of relief. In a case with the history of a recent inflammation, with fixation of the uterus and a tender and painful mass on one or both sides of the pelvis, with some rise of temperature, the author advises an expectant plan of treatment. Rest; copious hot vaginal and rectal douches, if grateful and well borne, the inclined decubitus; a poultice to the lower abdomen if there be much pain; and later glycerin tampons, or 15 per cent. ichthyol and glycerin, or 50 per cent. boro glycerin. Painting the vault of the vagina every second or third day with

Churchill's tincture of iodine, or vaginal galvanism, and daily soluble movements from the bowels will often bring about resolution and absorption and a healthy restoration of the organs.

Appended to the paper is a table of operations performed by the author.

Dr. Augustus P. Clarke discusses the

Treatment of Fibromyoma of the Uterus.

The hemorrhage he states can often be kept under control by curetting the cavity of the uterus at intervals. Apostoli's method of galvanism will yield the best results in the interstitial variety on account of the contractions it produces in the fibrils of the muscular tissue of which these tumors are composed more than any other variety. The same is true of the subserous or subperitoneal variety. In tumors of slower growth, the employment of electrolysis may for a time be attended with seeming benefit, but it cannot be long continued without risk of exciting serious inflammation of the parametric tissue, or of superinducing or hastening a malignant degeneration. The removal of the appendages may be of material benefit, though this method does not produce as good results as are obtained by hysterectomy. Electricity should not be employed in tumors situated in the corporeal or fundal portion of the uterus, for later experiences show that the benefits to be derived by its use can best be had in those cases in which the tumor was originally interstitial, and from its position was made up of the muscular element, or was of a subserous or subperitoneal type, and had on account of the presence of an undue proportion of the muscular tissue taken on a rapid growth.

Dr. J. P. Elliott contributes a paper on

The Pathology of Pelvic Inflammation in Women,

in which he adopts the following classification of Dr. McMurtry:

1. Inflammation of the serous and cellular intrapelvic tissues cannot be separated clinically or histologically, hence they cannot be properly distinguished by the terms parametritis and perimatritis.

2. The pelvic cellulitis of Emmet, which corresponds to the peri uterine phlegmon of Nonat, is as rare as inflammation of the cellular tissue elsewhere.

3. Pelvic inflammation is, generally speaking, peritonitis resulting from disease of the ovaries or Fallopian tubes, or both.

4. Pelvic peritonitis presents every grade of activity, and is always symptomatic, never idiopathic.

We may name three general groups of these inflammations:

(*a*) Those of puerperal origin.

(*b*) Those of gonorrhœal origin.

(*c*) Those caused by infections carried to the endometrium by unclean instruments, tents, or medicinal agents, or those arising from traumatism.

The remaining paper in this issue is "The Indications for Cæsarean Section" by Dr. B. C. Hirst.

Among the editorials is a resume of the opinions of various authorities on the subject of castration in nervous diseases. The resume is prepared by Dr. Joseph Price.

IN THE SANITARIAN

for June appears an article by Dr. Charles Smart, U. S. Army, on

Drinking Water.

The lecturer stated that the main point or interest in regard to drinking water was the presence or absence of the germs of malaria, typhoid fever and cholera. When the germs of any one of these is present in water, there are also present certain organic compounds, as these germs generally enter water in sewage. It is for this reason that the chemist is appealed to to test for nitrogen compounds, etc., Inorganic salts are of course injurious if present in great quantity, but when that percentage is reached we can recognize their presence by taste.

Waters were classified as: rain or cistern waters, surface waters, subsoil or ground waters. Cistern water should be perefctly pure if moderate care is used in its collection and storage. Surface water is healthy or not according to the condition of the ground drained; but is so often unfit for use, that health officers generally condemn it.

The deep or subterranean waters are those that drain from high ground by sinking into the edges of a porus stratum underlying the clay of the bottom lands. When tapped by deep boring they are often found so full of mineral salts as to be unfit for use, but may be perfectly pure, such as that found in Memphis.

Statistics were given to show the comparative prevalence of typhoid fever in cities inversely proportional to the purity of their drinking water.

In the same number are articles by Dr. Samuel W. Abbott on "Recent Progress in Public Hygiene and Preventine Medicine;" by Dr. G. P. Coon, on "Needful Precautions Against the Spread of Communicable Diseases by Travel;" a suggestion that by means of a car or part of a car reserved for invalids, and built with special view to its being readily cleaned after use, the other passengers could be protected from contagion and a traveler need not go to his berth knowing that the last occupant had been a consumptive, or a convalescent from some infectious disease. "The berkshire Mills," by Dr. William Henry Thayer; "Sanitary Topography, Climate, and Mineral Springs of Maryland and Delaware," by Dr. A. U. Bell; "The Nation's Sin of Omission," by Dr. T. J. Bennett.

During the epidemic of cholera at Hamburg, Dr. N. Simmonds captured flies in a dissecting room where bodies were being examined and found numerous comma bacilli in them. It was ascertained that in one hour and a half these germs disappeared.

PERISCOPE.

IN CHARGE OF WM. E. PARKE, A.M., M. D.

THERAPEUTICS.

New Remedies of Last Year.

The following extract from *Treat's Medical Annual*, section of "Progress in Pharmacy," furnishes briefly some accurate facts on the latest new remedies.

Chloralose, a compound of glucose and chloral; recommended as a hypnotic, and favorably reported on after clinical trials by European and American investigators; has recently received a serious set-back, however, by adverse reports—including cases of poisoning.

Crystallin, a compound of either and methyl-alcohol, a substitute for collodium; the advantages claimed for it are, that it evaporates more slowly than collodium, forms a more durable and pliable or elastic covering, etc.

Di-iodform, a compound of carbon and iodine (about 96 per cent of latter); a new, odorless substitute for iodoform, non-irritating, and as good healing antiseptic as iodoform. Ferratin, presenting artifically the "iron component of animal food," a dietetic iron preparation from egg albumen and iron salts with the aid of alkalies; containing 7 per cent of iron; a brownish-red powder, almost odorless and tasteless. Easily assimilable, nourishing and strengthening, it is a food and blood tonic, highly recommended for anemia, chlorosis, loss of appetite, etc.

Sanguinal, another blood preparation, said to be a defibrinated, boiled- down blood with hemoglobin, consisting of 46 parts natural blood-salts, 10 parts oxyhemoglobin, and 44 parts peptonized muscle albumen; it can hardly be a savory morsel, and is dispensed in palatable tablets—for that reason, probably.

Somatose belongs in the same category; it is a nutritive product, 1 part representing 6 parts beef; occurs in granular powder form, easily soluble in water —so that it can be readily added to drink or food without patient's knowledge; is quickly absorbed, light on the stomach, and strengthens and nourishes the system naturally.

Abrastol is a new intestinal antiseptic, a sulphonated naphtol derivative.

Gallanol, a substitute for pyrogallol, is produced by boiling tannin and anilin oil together, with other manipulation. It is applied in eczemas, psoriasis and other skin affections; reports are favorable, and it has come into extended use in a surprisingly short time.

Formalin is a new disinfectant; a powerful bactericide, but comparatively non-toxic; safer to employ in ½ to 1 per cent solution than the usual to arbolic acid or sublimate solutions.

Thiosapol, new base for cosmetic and dermatological preparations; it is a sulfur compound of the same class as thiol; introduced in the form of creams, toilet soaps, etc.

Tetra-ethyl-ammonium has been introduced as a uric acid solvent, the discovery of this propertybeing the result of a systematic and extensive research at the Edison laboratory. Dr. Peterson, of New York, sponsored the new remedy, publishing a long climical report with most encouraging results and great promise; but no interest has been manifested in the matter by the profession generally.

Piperazin, the powerful uric acid solvent introduced a year before by Schering, has meanwhile become more popular and is now in extensive use here and in Europe. The therapeutic value of this remedy is now assured, and record of successful application is growing; and not only is applied for gout, rheumatism, gravel and other similar affections due to uric acid diathesis, but diabetes and other dieases are yielding to the influence of its solvent powders. Pharmacists should make a note of this correct dispensing method; piperazin-Schering, 10 grammes; water, 150 grammes. Make solution, and direct patient to dissolve a tablespoonful (10 grammes) each morning in a litre (quart) of water and drink during the day. That is the only correct dosage and method of exhibiting the drug.

Salipyrin, although several years old, has only been in use here during the past year; still, in this short time it has made good progress and is now in considerable use. A drawback to its success has been the practice in some places of trying to make salipyrin by simply mixing salicylic acid and antipyrin; this produces a mixture entirely different in physiological and therapeutical effects from the definite chemical compound. Salipyrin has found a wide field of application, as antipyretic, anti-rheumatic, analgesic (particularly in painful menstrual disorders), etc.; but its special recommendation has been as almost a specific for influenza, as a valuable aid in aborting incipient diphtheria, as a ready and effective remedy for simple coughs, colds, catarrhs, etc. The literature on salipyrin has accumulated rapidly during the past year, and all reports indicate that it is a most valuable agent.

MEDICINE.

Treatment of Red Nose.

Helbing (*Therap. Monatshefte*, January, 1894), calls attention to the treatment of red nose—a condition of little importance, it is true, but decidedly annoying to the possessor. The condition he refers to is the bluish-red color of some noses upon remaining for sometime in a warm room, coming in from the cold winter air, etc. The treatment he advises is the systematic application of the galvanic current. Both poles are applied to the nose and are continually moved about. The strength of the current he has regulated

by the amount of burning complained of by the patient. Five to eight elements of an ordinary battery suffice. If the patient is very sensitive, the anode may be applied to the zygoma and the nose gently stroked with the cathode. This application is followed by an intense redness of the skin, which lasts for an interval of two to forty-eight hours. Too strong currents must be avoided on account of excessive irritation they produce. The applications are repeated at intervals of two or three days. The method requires patience, and a considerable number applications (at least ten to fifteen), and the author has had to hold as many as thirty sittings. The author has used the method in thirty-one cases, and always with success, and gives report of two of the more obstinate cases.—*Cincin. Lancet-Clinic.*

Lithæmia.

On March 6th Professor DaCosta gave by invitation a lecture in the Medical Hall of the University of Pennsylvania on the Pathology of Lithæmia, and, taking this for a foundation, he indicated a line of treatment which, coming from such an authority, is worthy of full consideration. The term "lithæmia," as applied to a morbid state, involves much more than the presence in the blood of a mere excess of lithic or uric acid. Lithæmia is a modified from of gout, and appears to be the form in which gout particularly manifests itself in America; but in lithæmia deposits of urates in the vicinity of joints are not observed, and attacks of acute arthritis of toes and fingers do not occur. There may be, however, a painless enlargement of the terminal finger joints, especially in elderly people, with impairment of function. The cardiac hypertrophy and kidney degeneration of true gout do not belong to the clinical history of lithæmia. The blood tension may be increased, but it is so to a less degree than in gout, and the arteries do not exhibit the atheromatous condition that characterizes the graver form of the disorder. The spmptoms have already been described by the same authority. The main points are the impaired digestion, muscular pains, neuralgic attacks and pains in the tendons, indisposition to exertion, irritability of temper, depression of spirits, frequent and severe attacks of vertigo and migraine, sleeplessness, and drowiness during the day. The main factor in treatment is regulation of the diet. The food ought to be mainly vegetable. Green vegetables (especially asparagus), fresh fruits, stale or toasted bread, with the white mear of poultry and fish, should constitute the chief items. An excess of carbohydates, especially sugar, should be avoided. The only drink to be allowed is water, and sufficient quantities should be taken to flush the kidneys. Mineral waters may be ordered to accomplish the same purpose, Alcohol should be positively excluded. Exercise in the open air is also on important part of the treatment. But little drug treatment is required. Saline laxatives are very useful. A combination of lithium carbonate (2 gr,) with extract of nux vomica ($\frac{1}{8}$ gr,) given after meals is of special value. In attacks of lithæmic migraine a few doses of a mineral acid, it is claimed, will often cause the symptoms to disappear.—*Lancet.*

Physiology by Byron Robinson.

Few physicians realize the great usefulness of the omentum in abdominal surgery, except those who experiment on the abdominal viscera of animals or frequently open the human abdomen, The omentum is very small in infants according to my dissections. In adults it varies considerably. In some bodies we find it rolled and tucked up in one corner of the abdomen, especially if it contains but little fat. In most cadavers we find it covering the whole of the viscera below the the liver and stomach. In one body, Dr. Waite and myself post-mortemed last month, the heavy, thick omentum covered all the abdomen below the liver and stomach like a quilt tucked in around a bed. It almost equaled a second abdominal wall. It was a great and excellent protection of underlying viscera. The omentum is a double fold of peritoneum extending from the stomach to the colon. It generally descends into the pelvic cavity before it reflects to pass upon the abdomen to cover the colon. The uses of the omentum are: (a) it prevents the invasion of infection. As soon as infection gains entrance to the peritoneal cavity the omentum immediately circumscribes it. The omentum enables the inflammation to be coralled. Barriers are at once thrown out and the infectious, invader is checked. It quickly circumscribes perforated wounds of the intestines, appendix or other viscera. It is a kind of man-of-war, ready at all times to move on an infectious invader of the peritoneum. The omentum brooks no foreign invasion of infection. It assumes pleu-potentiary power over every peritoneal intruder and imprisons him early on the border. The omentum is the surgeon's best friend. It saves life of many a patient. (b) It prevents the adhesion of the intestines to the abdominal wall. It is common in autopsies to find the intestine adherent to the wall of the abdomen where the omentum accidentally happened to be absent. The adhesion of the intestine to any point is apt to destroy peristalsis and thus prevent the onward fæceal current. Nipping of the circumference of the gut from adhesions is just the same as Litter's hernia. (c) It heals wounds. I have shot many dogs and found in autopsies or in operating that the folds of the omentum had dropped into the wound and in many cases had completely healed it. The omentum has vital interests in the economy.

Nitrite of Amyl and Trinitrin in Hystero Epilepsy.

It is perhaps not out of place to call attention to a bit of recent experience with nitrite of amyl and nitro-glycerine in hystero-epilepsy

Case under consideration that of Laura W., was first seen with Dr. C. in February, 1891. It exhibited with classical precision the well-known striking features of the disease, consisting of a period of muscular tetanization, loss of consciousness, noisy respiration and deglutition, succeeded by the minor classical movements rapidly giving place to a series of exaggerated motions or contortions; body taking posture extreme opisthotonos, which would be exchanged for that of pleuros-thotonos with feet extended, toes pointed and distorted, displaying the *le pied bot hysterique* of Charcot. One attack would follow another with intervals of quiescence of variable length; consciousness would be restored and no complaint be made, except of severe pain in left ovary and left supra-mammary space. Pressure in either situation named had the effect of lessening or arresting the paroxysm, though the experiment of inducing their return by repeating the application was not tried for fear of provoked unfriendly comment.

Between February, 1891, and November, 1893, there occurred two slight attacks, the last of which was a single convulsion, and was due to an injury to the foot, caused by stepping on a nail. November 22, 1893, she was again seized; onset as violent in all its details as in first attack. She was found in extreme opisthotonos. Chloroform was administered, causing slight relaxation. It was repeated again and again without appreciable effect. A two-drop pearl of nitrite of amyl was crushed in the folds of a napkin and held to the nose. Almost immediately muscles rigid as iron bars relaxed, teeth and lips parted, arms fell limp by the sides, the body resumed a natural position bathed in profuse perspiration, and lastly the patient turned on her side and dropped into unbroken slumber, from which she did not awaken for many hours. In the next twenty-four hours there was no repetition, but at the end of that time there occurred the last of the series, which was easily controlled by a single two-drop pearl.

On the following day, and each day thereafter, she has received three doses of nitroglycerin of 1-250 of a grain each, tablet triturates of that strength being employed, which no doubt has kept off subsequent attacks. To date (Dec.8th) there has been no recurrence and none is expected, as she is able to be up all day and attend to light household duties, and complains less of suffering in ovary and breast, and says she feels much stronger and better in every way than during convalescence after any previous attack.—*R. B. Mc. Call, M. D., in American Theapist.*

SURGERY.

Intestinal Approximation.

In an article in the New York *Medical Record* on this subject, Dr. J. B. Murphy records a long number of cases and draws the following conclusions:

1. The more rapidly the operation is performed, the less the danger from shock.
2. The less the manipulation and exposure of the intestine, the less the danger of infection, post-operative paralysis, and adhesions.
3. The more uniform and continuous the pressure at approximation, the greater the assurance of adhesion and the less the liability of infiltration.
4. A line of approximation is as good as half an inch.
5. Mechanical means in the last five years have produced better results than the suture, in both lateral and end-to-end approximations.
6. The mortality in end-to-end approximations is much less than in lateral apposition, and should always be given the preference.
7. The more perfect the juxtaposition of the various layers, the less the interposition of fibrous tissue, and the more complete the regeneration across the line of union.
8. The juxtaposition of the similar histological layers of the wall of the intestine is an assurance against cicatricial contraction.
9. The more extensive the approximation surface, the larger the fibrous deposit, the greater the contraction.
10. The contraction with end-to-end is less than with lateral approximation.

An Italian physician says that strontium bromide is particularly valuable in gastric affections, especially acute catarrh, which, he says, show anew the remarkably favorable action of the drug. Carselli uses a syrup made by dissolving thirty grains of strontium bromide in a mixture of a fluid ounce of syrup of bitter orange peel and three fluid ounces and a half of distilled lettuce water. This amount is to be taken daily in three doses, during and after meals. It stops the vomiting and lessens pain. It is thought to act both directly upon the nervous system and as an antiseptic, arresting fermentation and thereby reducing the flatulent distension that gives rise to the pain.

ARMY AND NAVY.

CHANGES IN THE U. S. ARMY FROM JUNE 24 1894, to JULY 7, 1894.

Captain Louis S. Tesson, Assistant Surgeon, is relieved from dnty at Jefferson Barracks, Missouri, upon the arrival of Captain Charles B. Ewing, Assistant Surgeon, and ordered to duty as Attending Surgeon and Examiner of Recruits, Chicago, Ills., relieving Captain Daniel M. Appel, Assistant Surgeon.

Captain Appel on being thus relieved, ordered to Fort Porter, N. Y., for duty, relieving Major Curtis E. Price, Surgeon.

Major Price on being thus relieved is ordered to Fort Custer, Montana, for duty, re-

lieving Captain Peter R. Egan, Assistant Surgeon.

By direction of the President, the retirement from active service, June 13, 1894, of Colonel Bernard J. D. Irwin, Assistant Surgeon General, is announced.

Major George H. Torney, Surgeon, is relieved from duty as Attending Surgeon and Examiner of Recruits, at Philadelphia, Pa., and will report in person to the Superintendent U. S. Military Academy, West Point, N. Y., for duty at that post, relieving Major Philip F. Harvey, Surgeon, who after being thus relieved will report to the Commanding Officer, Plattsburg Barracks, N. Y., for duty at that post.

First Lieutenant Charles Wilcox, Assistant Surgeon, relieved from duty at Angel Island, Cal., and ordered to Presidio of San Francisco, Cal., for duty, relieving First Lieutenant Harlan E. McVay, Assistant Surgeon.

Lieutenant McVay, on being thus relieved, ordered to Alcatraz Island, Cal., for duty, relieving Captain Ogden Rafferty, Assistant Surgeon.

Captain Rafferty, on being thus relieved, ordered to Benicia Barracks, Cal., for duty, relieving Major Joseph B. Girard, Surgeon.

Major Girard on being thus relieved, ordered to duty at Presidio of San Francisco, Cal.

Lieutenant Colonel Johnson V. D. Middleton, Deputy Surgeon General, is relieved from duty at the Presidio of San Francisco, Cal., and will report to the Commanding General Department of California, for duty as Medical Director of that Department, relieving Lieutenant Colonel, Albert Hartsuff, Department Surgeon General.

Lieutenant Colonel Hartsuff on being thus relieved, will report in person to the Commanding General Department of the Missouri, for duty as Medical Director of that department.

Leave of absence for two months, to take effect upon the return of Major Calvin DeWitt, Surgeon to Fort Leavenworth, Kansas, is granted First Lieutenant William F. Lippitt, Jr., Assistant Surgeon.

Leave of absence for one month to take effect on or about the July 1st, 1894, is granted Captain Guy L. Edie, Assistant Snrgeon.

PROMOTIONS.

Lieutenant Colonel Joseph P. Wright, Deputy Surgeon General to be Assistant Surgeon General, with the rank of Colonel, May 16, 1894.

Major Alfred A. Woodhull, Surgeon, to be Deputy Surgeon General, with the rank of Lieutenant Colonel, May 16, 1894.

Major John S. Billings, Surgeon, to be Deputy Surgeon General, with the rank of Lieutenant Colonel, June 6, 1894.

Captain William R. Hall, Assistant Surgeon, to be Surgeon, with the rank of Major, May 16, 1894.

Captain George H. Torney, Assistant Surgeon, to be Surgeon, with the rank of Major, June 6, 1894.

NEWS AND MISCELLANY.

American Academy of Medicine.

XIXTH ANNUAL MEETING—PRELIMINARY NOTICE.

The XIXth Annual Meeting of the American Academy of Medicine will be held at the "Waumbek," Jefferson, N. H., on Wednesday and Thursday, August 29th and 30th, 1894. The greater part of the time is to be devoted to the discussion of certain problems relating to the Medico-social Relations of the Medical Profession to the "Dependent Classes." The following papers may be expected:

"The Retrogressives: What Produces Them; Classification." Bayard Holmes, Chicago, Ill.

"Importance of the Study of the Subject to the Profession." Charles McIntire, Easton, Pa.

"The Provident Dispensary in England." H. Webster Jones, London, England.

Title to be announced. J. A. Spalding, Portland, Me.

"Assistance and Care for the Blind." Charles A. Oliver, Philadelphia.

"Prevention of Blindness." Benjamin Lee, Philadelphia.

"Present Status of Legislation for the Prevention of Blindness from Infantile Ophthalmia." Lucien Howe, Buffalo.

"Senile Dementia and Testimentary Capacity." J. N. Whittaker, Cincinnati.

Title to be announced. Gershom H. Hill, Independence, Ia.

"What Agencies Conspire to Check Development in the minds of Children?" J. Madison Taylor, Philadelphia.

"The Medical Service of the U. S. Pension Bureau." P. S. Conner, Cincinnati.

"Physical Training for Delinquents." Helen C. Putnam, Providence, R. I.

"Government Commission instead of State License." J. D. Kelly, New Haven, Conn.

"The Relation of Food Adnlterations to the Dependent Classes." Henry Leffmann, Philadelphia.

Title to be announced. G. M. Gould, Philadelphia, President's Address.

Title to be announced. F. H. Gerrish, Portland, Me.

Several additional papers have been provisionally promised, if they can be read they will appear in the completed program.

Arrangements have been made for a special excursion from New York and Boston and return at reduced rates. A choice is offered of an eleven days excursion, including most of the expenses, or of returning immediately at the close of the meeting, and is open to any one desirous of attending the meeting, whether members of the Academy or not. Any additional information about the meeting or the excursion may be obtained from

CHARLES McINTIRE, *Secretary*,
Easton, Pa.

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ORIGINAL ARTICLES.

BACTERIOLOGY IN MIDWIFERY, AND PROPHYLAXIS OF PUERPERAL FEVERS.*

W. P. GAMBER. M. D., Stanton, Mich.

Each and every day brings the thoughtful and careful physician more and more to face the fact that the scientific world is still progressing, and he who keeps apace with the literature of medicine must acknowledge the fact, as proven by bacteriological investigations, that the various forms of micro-organisms are the prime factors in the causation of a large majority of the diseases in the human family. The last decade has shown, through the efforts of Pasteur, Koch, Sternberg, Vaughn, Welch and many others, wonderful progress in this branch of medical science. Many new truths have been discovered and there are still many more to be sought. The advancement already made makes it the duty of every physician to give more than ordinary attention to this subject. With our standard works on bacteriology and a good microscope, we are able in many cases to make an early and correct diagnosis. This is especially important in tuberculosis, in which it enables us to adopt early and efficient treatment,

While the minute details and the discovery of these micro-organisms are not essential for the successful practice of midwifery, yet I do claim that we should have a thorough knowledge of the nature of those germs which are instrumental in the causation of puerperal fevers.

There is a great plea for scientific obstetrics, but scientific obstetrics is not complete without a thorough knowledge of bacteriology.

Sternberg says:—"Recent researches indicate that infection by streptococcus pyogenes through the endometrium is the usual cause of *puerperal fever*. Thus Clivio and Monti demonstrated its presence in five cases of puerperal peritonitis. Czerniewski found it in the lochia of a large number of women suffering from puerperal fever, but in the lochia of fifty-seven healthy puerperal women he was able to find it only once. In ten fatal cases he found it in every instance, both in the lochial discharge during life and in the organs after death. Widal carefully studied a series of sixteen cases and arrived at the conclusion that this was the micro-organism in all. Bumm and other observers have given similar evidence. Eiselsberg and Emmerich have succeeded in demonstrating the presence of the streptococcus in hospital wards containing cases of erysipelas. That puerperal fever may result from infection through the accoucheur, when he has previously been in contact with cases of erysipelas, has long been taught, and, in view of the facts above recorded, is not difficult to understand. But in view of the fact that the streptococcus of pus has been found in vaginal mucus and in the buccal and nasal secretions of healthy persons, it may appear

*Read before the Michigan State Medical Society, May 1st, 1894.

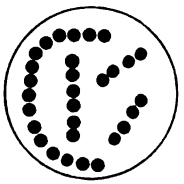
strange that more cases of puerperal fever not traceable to infection from erysipelas or from preceding cases do not occur more frequently. This is probably largely due to an attenuation of the pathogenic power of the streptococcus when it leads a saprophytic existence."

According to the teaching of Welch, which is in line with that of Sternberg, the class of micro-organisms chiefly concerned in the etiology of acute ulcerative endocarditis, meningitis, erysipelas, pyæmia, septicæmia, osteomyelitis, puerperal fevers, other septic and localized inflammatory affections and in general, the infection of wounds, embrace the somewhat heterogeneous group called pyogenic bacteria, of which the staphylococcus and streptococcus are the leading but not the sole representatives.

During the past three months I have made investigations in a number of healthy puerperal women, but was unable to find any of the pyogenic bacteria in the local discharge.

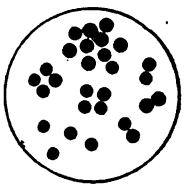
The fact that they are sometimes found in healthy puerperal woman does not prove that they are not the cause, for they are so widely distributed in nature, and found on healthy mucous membranes, waiting for some local lesion whereby they they may cause septic infection.

Fig. 1.



Streptococcus P.
Mag. 2000 Diam.

Fig. 2.



Staphylococcus.
Mag. 2000 Diam.

As these two micrococci, the streptococcus and staphylococcus, are often associated with each other and are similar in many respects, they will be considered in part together. They are both facultative parasites and are very common in suppurative processes generally. They are also common and widely distributed saprophytes which find the conditions necessary for their existence on the external surface of the human body, and of moist mucous membranes. They have been found upon the skin; in the secretions of the mouth, nose, and throat; in cultures from dirt beneath the fingernails of healthy persons; and in the dust of occupied apartments. Both of them grow, either in the presence or absence of oxygen, hence are called facultative anærobics. They stain readily with the basic aniline colors or methyl violet.

The steptococcus (Fig. 1) is the most important micro-organism under consideration. They are spherical in form, grow by binary division in one direction only, forming chains, and have a mean diameter of $\frac{1}{35000}$ of an inch. They multiply freely at ordinary room temperature, 60 to 70 degrees F., but more rapidly at blood heat. Thermal death-point, 130 degrees F. with ten minutes exposure. Its pecularity is to extend rapidly along the lymph spaces and lymphatic vessels, thus causing progressive phlegmonous inflammation.

According to recent investigations mecuric chloride solution, 1:2500, destroys vitality in two hours, and 1:30,000 restrains development; carbolic acid 1:300 destroys vitality in two hours, and 1:800 restrains development; creolin 1:130 destroys vitaity in two hours; and boracic acid solution 1:143 restrains development.

The staphylococcus aureus is shown in figure 2. They are spherical in form; with a mean diameter of $\frac{1}{35000}$ of an inch; are arranged singly, in pairs, in groups of four, and in irregular groups, and multiply rapidly at a temperature of 65 to 70 degrees F., but more rapidly at blood-heat. Thermal death-point, 140 degrees F. with ten minutes exposure.

This micrococcus differs from the streptococcus in the respect that it is not so apt to spread, but is found in furuncles, carbuncles, and various local abscesses; hence is the most common pyogenic micro-organism. Mercuric chloride solution, 1:2500, destroys vitality in two hours, and 1:80,000 restrains development; carbolic acid 1:125 destroys vitality in two hours, 1:800 restrains development; and boracic acid solution 1:30 destroys vitality in two hours, and 1:327 restrains development.

The staphylococcus has been considered, not because it is thought to be the cause of puerperal fever, but because of its similarity and intimate relation to the streptococcus; yet while the researches as given by Sternberg in his work on Bacteriology are still in line with the re-

searches of the present day, and the streptococcus pyogenes is still held to be the principle micro-organism causing puerperal fever, it is possible that the staphylococcus aureus has something to do with some of the milder cases of puerperal fever.

Experiments have shown that when the staphylococcus aureus is injected in sufficient quantity into the peritoneal cavity of some of the lower animals, it sets up fatal peritonitis, death taking place in a few days; and, what is true of this germ, is also true of the bacillus coli communis and the proteus vulgaris when they get into the peritoneal cavity, either from perforation of the bowels or some other source.

Good authority says that death may occur from the rapid absorption of a chemical poison developed in putrefying material, the decomposition of which is due to the "bacterium termo," and as this putrefying fluid is a good medium for the development of other life-destroying micro-organisms, the offensive odor should serve as a warning, in which case thorough antisepsis should be secured.

Lusk says: "In cases, however, where puerperal fever has a distinct period of invasion, and progresses step by step to a fatal ending, bacteria are always found invading the genital canal, and that the coexistence of blood-poison with the local lesion is an essential feature of puerperal fever." This lesion is usually of the endometrium, but it may be an abrasion of the vaginal mucous membrane, or a laceration of the cervix, and in rare cases they pass by the Fallopian tubes to the peritoneal cavity and excite salpingitis and peritonitis.

PROPHYLAXIS.

In the consideration of the prophylaxis of puerperal fever, we must realize the fact that the faithful practice of aseptic and antiseptic precautions greatly lightens the burden of responsibility that the practitioner of obstetrics must carry, yet his efforts are many times thwarted by ignorant and meddlesome persons.

We will discuss this part under three heads:

(1). Prevent the introduction of germs. —Different lying-in hospitals have adopted various sets of rules for the prevention of sepsis in the practice of midwifery.

The object of this paper is to give a few suggestions relative to the prevention of sepsis in private practice, as it differs very much from that which it is possible to carry out in hospitals. All agree that the attending physician should exercise the most scrupulous care in regard to personal cleanliness and disinfection, especially of hands, finger-nails, clothing and instruments. Before making a vaginal examination the hands and finger-nails should be well washed and scrubbed and then dipped in a solution of mercuric chloride 1:1000. The fingers should then be annointed with plain or camphorated vaseline. All instruments used should be thoroughly disinfected the same as before using them about a wound in surgery.

The use of the vaginal disinfectant douche at the onset of labor is still an unsettled question. Some use it and others do not. Should you arrive in time and wish to use it, first bathe the external genitals with a solution of mercuric chloride 1: 2000, then give the vaginal injection of a one to two per cent. solution of creolin, which is preferable to mercuric chloride for this purpose, as it is a lubricant as well as an antiseptic. Mercuric chloride is astringent and facilitates laceration. The vaginal douche of warm sterilized water continued daily during the last two months of gestation I believe to be beneficial, and I have never seen any ill effects from its use.

In regard to the use of the vaginal douche after labor, it is not approved of by a large number of physicians at the present day; but its use has strong followers on every hand. Galabin gives a simple post-partum irrigation of mercuric chloride 1: 3000, but during the entire puerperal period he uses two to two and one-half per cent. solution of carbolic acid. In uncomplicated, unprotracted cases of labor, the daily use of the douche of simple warm sterilized water is usually sufficient, provided the genitals are first bathed with sterilized water or some disinfectant solution, I believe that the thorough bathing of the lochial discharge from the genitals, at least twice a day, is of more importance than the vaginal douche. I have used this alone in several cases and find that when the bed-linen, clothing, etc., are unsoiled there is scarce-

ly any odor when at the bedside, and the patients seem to do as well as when both are used. I occasionlly find some difficulty in getting the average nurse to use the water in bathing the genitals, as some of them still think that not a drop of water must touch the patient until after the ninth day; but when you explain to the nurse its object, with instructions that they should be wiped thoroughly dry, your directions are usually followed. I find the absorbent pad for taking up the lochial discharge answers every purpose when made of several thicknesses of cheese-cloth which should be changed at least twice a day. Absorbent cotton may be inserted between the layers of the cheese-cloth.

The importance of good ventilation should not be forgotten, as it is a very efficient means of limiting the number of pyogenic bacteria and other noxious exhalations so common in occupied apartments. The lying-in room should be the largest and most pleasant in the house.

Good light is also beneficial. Day-light, and better still direct sunlight, is a powerful destroyer of many bacteria.

(2). Destroy the action of these germs. Remedial measures under this head will be considered in complicated cases, and when labor has been protracted, giving rise to probable laceration of the cervix, or of the vaginal mucous membrane; and, also, when the lochia becomes of an offensive odor after careful attention has been given to cleanliness and bathing the genitals. It is in these classes of cases that there is danger of sepsis, and in these the intra-vaginal douche should be used once or twice daily, as the case demands, of carbolic acid two per cent, or creolin two per cent; and, if mercuric chloride is used, it should be as strong as 1: 2000.

When these antiseptics are reduced materially in strength from that recommended, they fail to occomplish their purpose and merely act in partially washing away any micro-organisms that may be present and retarding the development for a time of those left *in situ*.

When the bad odor of the lochia is not controlled by using the douche, and it is found to come from the uterus, the advisability of using the curette and intra-uterine douche should be considered.

At the New York Post-Graduate School and Hospital they have adopted the following rules:

"An ante-operation douche should be given before any procedure, and an intra-uterine post-partum douche after instruments or hands have been in uterus, of carbolic acid three per cent. or creolin one per cent."

"Mercuric chloride 1: 1000 is used for hands and bathing genitals."

"N. B. No mercuric chloride is used in the parturient canal."

"No ante-partum nor post-partum douche shall be given without cause."

The strength as given by Sternberg of the following germicides may be used as a douche without doing harm to the vaginal mucous membrane: mercuric chloride, 1: 1000; carbolic acid, 1: 50; crelin, 1: 50; boracic acid, saturated solution.

(3). Shut up the doors—veins, lymphatics and Fallopian tubes. This is to be done by using suitable means for maintaining uterine contraction.

Lusk says: "In the peurperal period the warm carbolized douche stimulates uterine retraction."

While I do not think much of the binder for the purpose it is usually applied, it certainly gives comfort in many cases; and, when put on firmly for the first five to ten hours in cases of uterine inertia, it maintains intra-abdominal pressure, causes the after-pains to quiet down more readily, and is thought to prevent flooding. When this uterine inertia is due to depression of the vital forces, quinine, in moderate doses, becomes a valuable stimulant.

In the treatment of severe post-partum hemorrhage caused by uterine atony, the fundus should be pressed with one hand, with the other hand clear away all clots and give a hot intra-uterine douche. Ergotine may be given by hypodermatic injection.

I speak of these means of preventing the loss of blood because of its importance to the subject before us, as anæmia induced by hemorrhage is said to increase the susceptibility to septic infection, hence the loss of blood should be reduced to a minimum.

It has been my purpose in this paper to be as brief as possible in presenting the foregoing important measures, many of which may not be new, but if they are strictly followed in the management of obstetrical cases, the mortality may be reduced to a small percentage and the practice of midwifery be both easier and more successful.

THE THERAPEUTIC DIFFERENTIATIONS OF ACUTE AND CHRONIC DISEASES.

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A little over forty years ago, armed with the knowledge implied by a university medical degree, and fortified by the standard text books of the day, Watson, Wood, and the reference books of Copland, I started out in the avocation of trying to subdue disease. I can recall instances in my early efforts that brought me credit in the management of acute diseases, and not a very few humiliating defeats in the treatment of chronic ones. In some of the latter I was in not a few instances worsted by empirics, and by some nostrum remedies. Thinking that my diagnosis of the disorder must have been incorrect, a careful reading of authorities usually verified the accuracy of my diagnosis as well as the correctness of the treatment according to the standards. Finding that such an outcome in the treatment of chronic maladies by other physicians was by no means uncommon; that some skepticism of the healing art, and especially of scientific methods over empirical ones in lingering diseases, should have arisen, is what might be expected according to the ordinary rules of evidence. So a determination arose and became a ruling motive of my life to fathom the causes of the failures brought upon me by those whose knowledge of the elements of medicine, such as anatomy, physiology and pathology, were beneath contempt; and since that time a large part of my leisure hours has been devoted to the solution of the causes of my failures.

This led me into the study of etiology and hygiene, the latter a subject far too much over-looked by physicians in its bearings upon the production of disease and the restoration of health. Especially has a good conception of the first four laws of health enabled me to guide aright the sufferers from chronic maladies so that their health might be fully restored. For, bear in mind that the condition of the chronic invalid is not like that of one suffering by an acute disease; he is not confined to one room, or to indoor life; he takes his three meals a day more or less heartily; he is not kept between sheets day and night alike, but resumes his clothing each day; he is not deprived of exercise and the glorious light of sunshine like the acute sufferer in his darkened apartment.

In the management of acute diseases, both medical and lay attendants pay strict attention to the observance of a correct diet; very different is the ordinary routine during the treatment of a chronic derangement. If the victims have good appetites they are left pretty much to follow their discretion as to how much or what they ought to eat and drink; as to the manner and times of it, they are seldom thought of, much less mentioned.

Patients thus left to follow their own whims and caprices are allowed, while in a weak state, to try experiments on themselves, usually very painful ones, as to what is good for them, and what is not; information which the medical attendant should have furnished them in advance. Far too commonly the physicians' directions as to diet in chronic maladies are not specific, but vague and general, or are alluded to in a very languid and careless manner, so that the patients rightly conclude that very little importance is to be attached to them. Hence the observance of dietary rules, even in digestive derangements, is of the careless and fitful kind, and is apt to be worse in its selections than the physician intended. The inquiry often made of those who have long suffered under digestive and hepatic disorders in which a proper diet is often of supreme importance, as to what regulations the previous attendant had imposed, elicits the all but uniform response that they were told to be a little more careful than ordinary—whatever this may mean. Such an inculcation virtually concedes that the patient knows just about as much as the physician what is best for a sick man to eat, whether or not this be a slice or two of fried bacon, eaten with refined flour bread steaming hot from the oven, imperfectly masticated and hastened onward to the stomach with mouthfuls of tea or coffee, supplemented by a section or two of pie or of sweet cake at each meal.

Now as observation has made it clearly

apparent that the largest number of digestive and hepatic derangements are the products of errors in diet, it follows by the simplest rules of logic that if the cause be continuous, so also will be the effects. Yet in the face of this truism, many physicians only seek to remove a jarring dissonance in the machinery of life by the application of more and more medical oil, rather than by removing the cause on which dissonance depends.

The question of exercise is a very important one for those laboring under a chronic malady, as it involves the bringing to bear of a very active agent to restoration. Granting this is equivalent to admitting that the lines of treatment for this class of diseases are wholly different from and inapplicable to the acute.

The therapeutical benefit to be derived from regular exercise by those laboring under chronic maladies, seems to call for freshening up in the physicians mind, judging by the frequency of its neglect and the almost exclusive reliance on drugs to effect their removal. Nor is this mode of dealing with lingering diseases confined to a practitioner here and there. I have just looked into a standard text-book which is doubtless a guide to thousands, in which the nearest approach to recommending exercise as an aid to the cure of dyspepsia, is to travel. Much sounder was the advice of the celebrated Abernathy to a nobleman laboring under that ailment, "Earn a shilling a day and live on it." The cogency of this advice will be perceived when the effects of exercise are correctly pictured in the mind. It accelerates the circulation and nutrition of the tissues, enhances the building up of the new, and promotes the removal of the old and effete; thereby communicating renewed energy to all the functions, creating a desire for food with an ability to digest and assimilate and use it up morphologically. At the same time it exalts the functions of the nerve cells, gives impetus to the flow of this subtle force and begets the necessity, desire and certitude of good periodical rest and sleep.

Man draws his clothing and sustenance, not from his immediate surroundings alone, like the animal world, but from all the latitudes and longitudes of the earth, yet, although the wisest of all mundane beings and at the same time the most commanding and powerful, he is the sickliest of them all. And why? Simply because he neither knows or obeys the Ten Laws of Health. Barring inheritance and atavism, which can in time be obviated just as they can be originated when their productive factors are known, and accidents, of which the writer is a sample, all the disabilities ordinarily attributed to divine wrath, are avoidable, and they are not only avoidable but, with fewer exceptions than the fingers of a hand, curable.

I have often wondered at the skepticism of some physicians as to the power to cure. I know of no field equal to that of chronic maladies to convert unbelievers. Even the sources of fallacy that belong to the management of an acute disease are elimated in the chronic. The elements of the contest are simple, fair and open to no deceit or mistake. Here, for example, is the case of Mr. X., Y. or Z., plain to every eye-in open court so to speak. Dr. A, B, C and the vis medicatrix naturæ, after fair trials have failed to cure. The same person with the same disease is presented successively to each of these physicians as well as to the let alone method, and yet the lingering malady persists as before. But no sooner does Dr. D put his hand to the case than there is a prompt change for the better, which goes to complete and lasting success. Surely when this can be done, and is done for scores and hundreds of cases, all the needful evidence of ability to cure is furnished and which no one can decry or invalidate.

My old instructor, Professor Dickson, of the University of the City of New York, made a remark that I have often thought of, to-wit: "That acute diseases should be treated acutely, and chronic ones chronically." I know of no work nor any teacher of medicine that elaborates therapeutically and in detail, this injunction. More than ever am I daily assured of its truth and importance, and that the success that irregulars now and then attain to depends upon the use of remedies that do not overmuch disturb physiological function in the management of obstinate chronic maladies. Formerly it was a common query by applicants for treatment, "Doctor how long will you lay me up under your treatment before I can go about again?" My answer almost invariably is, "Not a day, but that day by day under the use of remedies that will

correct disordered functions, you will feel better and better until complete relief is afforded."

Very rarely it is needful in chronic affections to make use of what a distinguished Professor called the *lions* of the materia medica, but almost invariably of the *lambs*—gentle, but sufficient to bring an deficient function up to the healthy standard and held it there until sufficient tone and strength are acquired for the organ to run the function normally by itself. In the management of all chronic diseases it is seldom needful to disturb the healthy organs by strong medication, and never by remedies that will lurk in the system and produce as much harm, almost, as did the disease for which they were administered.

For nearly all lingering diseases the fluid or solid extracts are to be preferred, if prepared by a reliable pharmacist. If an habitual hepatic torpor and constipation is indicated, give euonymus or stillingia, combined, when the stomach is weak, with extract of gentian and Trommer's extract of malt, or, if of a neurasthenic type, with extract of celery or cypripedium. If mercurials are indicated only the mildest should be used, and then only for a short time and at bed time exclusively, with sufficient aloin to carry them off through the large intestine mildly on the ensuing morning.

In short, over medication is a crying evil in chronic ailments. The usual report of patients after such a course is that, "the medicine helped me, but soon after I was quite as bad as ever." By laying aside all the active armamentarium in the treatment of acute maladies, and resorting to the vegetable extracts that will mildly exalt depressed functions or check excessive ones, to bring them, in brief, and hold them for a time up to the healthy standard until sufficiently recovered to act for themselves, the work of curing chronic maladies will no longer be thrown into the hands of traveling empirics.

The differential I have to suggest in the treatment of acute diseases is that also of over-medication, or too large doses, and not frequently enough repeated. The dosometric system has much in it worthy of attention, and so far as my observation extends, it is decidedly favorable to it, having long ago written upon the subject of smaller doses and more frequently repeated ones.

In reference to chronic diseases, however, I can confidently aver that a reformation in practice is urgently called for. The abandonment of active remedies, with the calming effects of opiates or of spirituous drinks, and a due attention paid to the laws of health, will work cures where all before seemed hopeless and delusive. The treatment needs to be as chronic in some instances as to extend to a month or more, or at least until all signs of the disorder have disappeared. Of course there are a few diseases like confirmed tuberculosis, cancer and paralysis, that are not radically amenable to any remedies, but if due attention is given to the conditions of health, not fitfully but habitually, then attacks can with few exceptions be avoided. I firmly believe that by keeping all the organs of the body in a healthy state we have the surest of all guarantees that the attacks of microbes can be reduced to a very small degree. Like some others of the class protozoa they can only abide or thrive and multiply amid fouled, unhealthy or diseased tissues and secretions.

In conclusion I can not help remarking my belief that microbes are nearly always a condition and not a cause.

Infant Feeding.

An infant should double its weight in six months, and treble it in a year, if its nutrition is in every way satisfactory. The weighing and measuring should be conducted monthly, and the practical point is this: If a child does not increase at the rate of one pound a month during the first year of life, and twelve ounces a month during the second year, its nutrition is not satisfactory. If a child does not grow nearly three-quarters of an inch every month during the first year of life, and half an inch a month during the second year of life, it is not satisfactory. The latter is, of course, not of the same importance as the former. A nurse should cease nursing if the result does not come near to this proportion with regard to increase of weight. Clearly, premature children would not be so large, though they should increase at the same ratio.—Percy Boulton in *Brit. Med. Jour.*

COMMUNICATIONS.

CLINICAL NOTES ON THE THERAPEUTICAL APPLICATION OF STATIC ELECTRICITY.

G. FRANK LYDSTON, M.D.,* CHICAGO.

It has seemed to me that the knowledge of the usefulness of static electricity in medicine has been too closely restricted to the more advanced neurologists; indeed, I do not think that it is so universal even among them as its value justifies. A short clinical paper may therefore be suggestive to the general practitioner, in whose field of work the static current would seem to be of fully as great usefulness as in neurological practice. My attention was first called to the practical application of static electricity by the late Dr. Knight, for many years superintendent of the New York Hospital for Ruptured and Crippled. While sojourning in New York City, I had the opportunity of seeing a number of cases in which Dr. Knight and his talented assistant, Dr. Gibney—the present superintendent—had used the static current for the treatment of chronic joint affections. Dr. Knight, whose experience was certainly very large, was especially profuse in his praises of the static current. I saw the current applied in quite a number of cases of chronic rheumatic and inflammatory affections of the joints with seemingly excellent results. Pain, swelling and impairment of motion were rapidly improved. Local improvement of nutrition was in some cases apparently very rapid, even in joints that had been for a long timediseased. Since entering private practice, I have on numerous occasions had an opportunity of verifying the observations formerly made in hospital practice. I will acknowledge, however, that the results have by no means been so uniform nor as well marked as in the hospital for the ruptured and crippled, a fact which is very readily explained. The constant supervision of the hospital cases and the regulation of diet, the maintainance of rest and the application of massage and passive motion were of course more readily secured than in private practice. Until recently I was in the habit of prescribing static electricity and having it applied by others under my direction. It has seemed a much more reliable agent since I have personally applied it in my office practice. I have found the static current especially valuable in neurasthenia of various kinds, more particularly in those forms associated with brain fag and sexual hypochondriasis. The application of the static current to the spine has seemed to have a marked stimulating effect upon the genito-spinal center. It has been my observation that in neurasthenia the static current is especially valuable when applied after the general faradic bath. Some eleven years ago I was myself the subject of profound neurasthenia resulting from over-work and the exhaustion consequent upon a dissection wound. I at that time developed atrophic changes in the muscles of the hands, which were pronounced by Dr. Lyman and the late Dr. Jewell the beginning of progressive muscular atrophy. Associated with this condition was a decided tendency to melancholia and some slight paretic manifestations in the lower extremities. I also experienced frequent attacks of palpitation and cardiac dyspnœa. I began the use of the general faradic bath, but the result was apparently an increase of the condition of depression with which I was suffering. On combining the general faradic bath with the application of the static current to the spine I experienced a most exhilarating and tonic effect. When as a matter of convenience I stopped the general faradic bath, I found that I obtained very nearly the same effects from the static current alone. It was several years before I recovered the use of the muscles of the hands, and even now atrophic changes are apparent, but the neurasthenic symptoms from which I suffered improved rapidly and practically disappeared within two or three months after the beginning o the treatment.

I will take the liberty of briefly presenting a few cases in which static electricity has seemed to me to be of considerable value.

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CASE I. This case was that of a physician, 40 years of age, whose condition in many respects resembled my own as far as neurasthenia was concerned. The gentleman had been advised by several prominent physicians to change climate as he had a slight cough and tuberculosis was feared. Another well known-physician had stated in a very ambiguous way that the fault lay entirely with the gentleman's liver. Between these two opinions the changes had been rung upon a large variety of forms of neurasthenia. I found on investigation that the gentleman had been subjected to a great deal of worry incidental to a change of location and financial embarassment. This, associated with family troubles, irregularity of eating and insufficient sleep had produced neurasthenia associated with considerable digestive derangement. The tongue was heavily coated, the bowels constipated, the liver somewhat enlarged and tender. The lungs, as far as I could determine, were normal, and the urinary functions perfectly normal. I stopped the nervine tonics with which the patient was inundating himself and put him upon the general faradic bath. He, like myself, complained of the depressing effects of the bath until I added the application of the static current. He called at my office the day after the first application of the static current and said, "Doctor, ever since yesterday I feel as exhilarated as though I had drunk considerable champagne." This effect was maintained, and within six or eight weeks the doctor reported himself as perfectly well, having taken in the meantime no medicine whatever, save a saline in the morning from time to time, as required.

CASE II. A young lady, 16 years of age, was referred to me for lateral curvature of the spine. Electricity in various forms, massage, gymnastics and various appliances had been used with comparatively little effect. There appeared to be a marked general lack of tone associated with local muscular disturbance. The daily application of the static current to the spine and to the muscles of the affected side brought about rapid improvement, and while the deformity has never entirely disappeared, it is scarcely observable, and since a few months after beginning the use of static electricity, has been readily corrected by very light spinal support.

CASE III. A young lady was referred to me, complaining of palpitations, frequent flushings, severe headache, and a general feeling of weakness. The "hot flushes" as she expressed it, alternated with extreme coldness of the extremities. The pulse was 120 and somewhat irregular. Both Dr. Moyer and myself thought we detected from time to time a slight systolic bruit. The patient also had occasional attacks of gastralgia, and *suppressio mensium*, which lasted for six months. I could find absolutely no organic condition to account for her symptoms. She was to all appearances a buxom and healthy young woman, had plenty of color, and her general appearance was incompatible with some of the symptoms with which she complained. My colleague, Dr. Moyer, who saw the case with me, was equally at a loss to explain the symptoms present. Personally I suspected incipient Grave's disease, and in this Dr. Moyer coincided. The patient was under treatment for about four months without obtaining any relief. I then put her upon static electricity, using the wind current over the entire back and sparks to the spine. The patient was so sensitive at first that the treatment seemed very severe, but she soon became accustomed to the current and tolerated it fairly well. Within a month after beginning the treatment the menses reappeared, and began recurring every two weeks. They soon became quite profuse, which I considered an indication for the cessation of the static treatment. The menses then became regular with normal intervals. They have been since their reëstablishment, however, associated with some pain and considerable prostration for a few days. It might be well to state in this connection that careful examination failed to reveal any disease of the uterus or its adnexa. The patient was a *virgo intacta*. Under the static treatment the patient's general symptoms improved but slightly. Her headaches became especially severe, and the idea occurring to me that there might be a refractive error, I referred her to Dr. James A. Lydston for examination, with the result of discovering a considerable degree of astigmatism. This was corrected by a proper glass, and I have rarely seen so happy a creature as my patient has since

been. She appears at the present time perfectly well excepting at the menstrual epoch.

CASE IV.—A young man, 18 years of age, received some ten years ago a severe contusion of the hip with resulting osteoperosititis of the femur in the vicinity of the great trochanter. He had at times been quite lame and had suffered considerable pain and tenderness in the affected part. The patient had taken all kinds of treatment, but was averse to any operative procedures. I therefore began experimentally the use of the static current with the result of a marked amelioration of the symptoms. The enlargment of the bone at the site of the disease soon appreciably diminished. There is a question in my mind whether the application of electricity will be sufficiently efficacious to avoid the necessity of an operation. The amelioration has up to date been sufficiently marked to afford considerable encouragement in this class of cases.

CASE V.—A young man, 22 years of age, during the course of an acute gonorrhœa developed gonorrhœal arthritis of the right knee. This resulted in slight anchylosis, which was broken up from time to time, the usual application of passive motion being subsequently made. The joint remained stiff, tender and swollen for some time. Counter-irritation and various forms of internal medication were apparently of no service whatever; but under the daily use of the static current the condition rapidly improved, and within 8 or 10 weeks the patient was practically well. The patient claimed that he himself could see a marked improvement from day to day in the early part of the treatment.

CASE VI.—A gentleman, 45 years of age, consulted me regarding what to him was a very embarrassing predicament. He claimed that for some months his sexual vigor had been gradually deteriorating. Some three months before he consulted me, his wife had gone away upon a visit, and he improved the opportunity to indulge in all sorts of dissipation with the exception, strange to say, of sexual excess, which, however, he confessed he would have indulged in if he had the slightest inclination thereto. On the return of his wife several weeks before he saw me, he found he was absolutely incapable of fulfilling his marital duties, both from sexual indifference on his part and an actual lack of vigor. Under the use of the static current to the spine the patient rapidly improved, and within ten weeks was restored to his normal condition of virility.

CASE VII. A gentleman, 30 years of age, was referred to me by Dr. John Bartlett of Chicago. The patient complained that his sexual vigor had become impaired, and that for two months he had suffered with severe pains in the small of the back, which were greatly aggravated by sexual intercourse and by changes of weather. At times he found that he was unable to follow his vocation, that of a mason. I found that the patient had a narrow and irritable meatus and a stricture of large calibre at a depth of half an inch. The prostatic urethra was also exceedingly tender and irritable. I performed anterior urethrotomy and passed sounds every few days thereafter in the usual manner, but without any resulting improvement. The patient was begining to be rather discouraged, and I suggested the use of static electricity. The current was applied to the lumbo-sacral region, and in less than a week the pain had almost entirely disappeared. Within three weeks the patient reported himself as feeling perfectly well. He has remained free from pain for nearly three months, with the exception of one occasion, when he had been working very hard during damp weather. A single application of the static current again brought about complete relief. The sexual function has apparently been restored to its normal condition.

I have used the static current in a number of other cases with a greater or less degree of success. In some instances it has seemed to have no effect whatever. I have, however, seen no cases in which it seemed to be injurious, although my experience would lead me to believe that in some delicate and neurotic patients the agent should be used with a certain degree of circumspection.

I will frankly confess that my principal object in presenting this brief paper has been to bring out a thorough discussion of the limitations of static electricity by gentlemen who are much better qualified than myself to express opinions upon the subject.

DISEASE OF THE EAR AS A COMPLICATION IN EPIDEMIC INFLUENZA OR GRIPPE.

LAURENCE TURNBULL, M. D., PH. G.,* PHILADELPHIA, PA.

During the epidemic of influenz or a grippe in 1889-90, and 1891, we treated a large number of cases of ear disease both in the hospital and in private practice, and reported the same in the *Virginia Medical Journal.*

In most of the cases there was earache followed by acute otitis media, with a hemorrhagic inflammation of the membrana tympani, passing into perforations of the membrana tympani, the result of a micro-organism migrated from the naso-pharynx. In some of the cases there were double perforations with more or less reflex irritation of the brain, and some involvement of the mastoid, followed by tissue abscess situated just beneath the cortical layer. There was pain, chill, and more or less fever, followed by perforation of the membrana tympani; at first a mucous and, after a time, a discharge of pus. In almost all the cases there was a feeble circulation, irregular pulse and weak heart.

Instead of yielding promptly to the ordinary treatment by sterilized cleansing with a solution of biborate of soda and glycerine, cocaine solution at night to relieve pain, it had to be followed by carbolic acid with boric acid and aqua pura and careful inflating of the middle ear. Most of the recent cases were protracted for three, four, and even six weeks, and some longer. Then the apophysis of the mastoid became painful, and still more so on pressure. The insufflation of air diminishes the pain for a length of time but leaves the apophysis sensitive to touch, then we resort to the following prescription: Baths for the ear, of alcohol at 90 per cent. containing 20 grammes of pophyrised boric acid, or a super-saturated solution which Lowenberg introduced into use for the past twelve years with success in this class of cases.

In the adults there was a large loss of the membrana tympani of a pyriform shape. The nose, throat and Eustachian tubes were inflamed and irritated, requiring spraying with a solution of aqua hydrogentii deoxide 3 per cent. solution with half water, until all secretions were removed, while the pain was relieved by cocaine at night, and then toning the part with liquid albolene and menthol, equal parts, of this using 2 to 5 of the albolene. This treatment had a most happy effect upon the second stage of the rhinitis. Tonics had also to be freely administered. Simple elixir of U. S. P. with phosphate of iron and strychnia, omitting the quinia and substituting salacin. Salacin acts as a mild tonic reduces temperature, excites perspiration and relieves the catarrah and hyperæmia of the naso-pharyngeal mucous membrane. The quinia is apt to increase the tinnitus aurium which was one of the annoying symptoms.

Ever since 1891, there have been more or less sporadic cases as sequelæ of this distressing malady. In a case which we visited very recently in consultation, the daughter of a physician, a girl three years old, following an attack of grippe both ears discharged pus and both membranes were perforated. She was pale and feeble and had been in her room for three weeks. The posterior nares were so much affected that a young physician thought from the symptoms she had adenoids and proposed their removal. We found no indications of such growth, but irritation of the mucous membrane extending from the pharynx into the Eustachian tubes. This unfortunately had not been attended to and the tubes had not been kept free. This can so easily be done and should never be neglected, for by simply passing a short rubber tube of four or five inches, armed with a nozzle, into the nose and while the child cries, blow with the mouth piece, this will open the tube, which should be kept open every day after cleansing the nostrils and ears.

The child had no appetite for food and was weak. We therefore ordered esssence of beef and eggs soft boiled, as this latter is the only perfect food we have. The essence of beef acts as an admirable stimulant, using a quarter of a teaspoonful of "Armour's Extract" to a cup of warm

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water, adding a little salt to this makes a nice drink and few children will refuse it. We also ordered the wash before referred to, and the tonic. It is wonderful what large doses of strychnia can be given in these feeble conditions following grippe, so as to tone the heart and improve the appetite and digestion. This child was reported well after two weeks treatment.

CONCLUSIONS.

First. There is a peculiar inflammation of the ear termed influenzal otitis.

Second. It almost always commences with hemorrhagic, dark blue or black bullae seen in the lower posterior segment of the membrana tympani.

Third. After a time a perforation of the membrana tympani takes place with a discharge of bloody muco-serous fluid.

Fourth. The pain, which is severe before the perforation, is not entirely relieved by it and continues assuming more of a neuralgic character. There are subjective noises (tinnitus aurium) such as pounding, hammering and roaring, and if not properly treated by inflation or by Politzer's douche or the catheter, remain after all the inflammation has ceased.

Fifth. Fatal results may follow from meningitis, abscess of the brain, and more frequently sinus phlebitis. Such cases we are called upon to diagnose, being sent to our clinic as abscess of the brain.

CHRONIC MIDDLE EAR INFLAMMATION FOLLOWING INFLUENZA.

There is a class of cases in which the only indication of the effect on the ear is the intense otalgia; no perforation nor discharge. After three weeks or a month the patients present themselves with sunken membrana tympani, and a profound deafness. These cases are promptly improved by the use of the catheter and vapor of chloroform if it is in one ear; or if both are affected the use of Politzer's air bag charged with chloroform or ether, or equal parts of ether and tincture of iodine, a teaspoonful in a pint of hot water, to use in an inhaler; and a liniment of tincture capsici with iodine, to be applied to the mastoid process.

Several cases presented themselves last March, and this treatment with tonics have improved the hearing after each application, and when followed up restored it to its normal condition.

Common Mistakes of Doctors.

To promise a patient that you will cure him.

To promise that you can render more efficient service than your fellow-practitioner.

To promise that your pills are not bitter or the knife will not hurt.

To promise that the chill or fever will not rise so high to-morrow.

To allow your patient to dictate methods of treatment or remedies.

To allow yourself to be agitated by the criticisms or praises of the patient's friends.

To allow yourself to buoy up the patient when the case is hopeless.

To allow yourself to make a display of your intruments.

To allow yourself to experiment or exhibit your skill uncalled for.

To allow yourself by look or action in a consultation to show that you are displeased, and that if you had been called first matters would have been different.

To allow yourself to indulge in intoxicating beverages.

To allow yourself to rely wholly upon the subjective smyptoms for your diagnosis.—*Ohio Medical Journal.*

THE PLAGUE IN CHINA.—A terrible epidemic of the plague is now raging in China for the first time in eleven years. The disease is reported by medical observers to be very similar, if not identical with, the Great Plague of London in 1665; The disease appeared first in Canton the 1st of April, and spread with frightful rapidity among the poorer classes until the deaths had numbered many thousands. Some statements put the mortality at 60,000. About the 8th of June the disease appeared in Hong Kong, where it is now epidemic. At first only the natives were attacked, the mortality being about ninety per cent, but finally the European inhabitants have become victims to the disease, and several deaths have been reported. The daily death-rate in Hong Kong is nearly one hundred. In Canton the spread of the disease continues, but the morality is lessening.—*Boston Med. and Surgical Journal.*

LACERATION OF THE PERINEUM AND RECTO-VAGINAL FISTULA.*

E. E. MONTGOMERY, M. D.,† PHILADELPHIA, PA.

GENTLEMEN:—I bring a patient before you, who is 25 years of age and gives a good family history; her childhood was healthy and puberty occurred at 13; menstruation normal in time, lasted from five to eight days, was always very painful on the second day. She was married at 24, and had one child in July, '93. Labor was of long duration and completed with instruments. She has suffered since considerably from ventral hernia, due to separation of the recti muscles, permitting a protrusion as large as two fists above the umbilicus. She complains of pelvic weight and of dull pain in the pelvis and down the limbs, and has to take frequent rest. Her bowels are constipated, requiring the use of purgatives. During the evacuation of the bowels a small quantity of fecal matter passes into the vagina. The urine is negative.

Examining this patient, we find evidence of laceration of the perineum, the repair of which has been attempted but was incomplete, as an opening remains communicating with the rectum. This communication is above the sphincter, so that the discharge occurs into the vagina. This is naturally a source of great discomfort to the patient, although the opening is very small. We propose to operate to-day for the purpose, first of closing the opening, and second, to repair the perineum, and having dissected up the flap through the point at which the fistula opens, we will close the opening with buried sutures, then introduce sutures to build up the perineum. In this way we feel sure both conditions will be relieved.

To add to the complications we find this patient has a retroverted uterus, which is very painful to the touch and is bound down by adhesions. If we are unable to overcome this while the patient is under the anæsthetic, we will possibly follow the perineal operation by opening the abdomen, tearing up adhesions, fix the uterus forward, and thus correct the displacement, although it will require a somewhat complicated operation, or rather a series of operations, to do so. It is much better, however, to do the entire amount of operating necessary to correct the condition at the one sitting, rather than to have her look forward to a second siege. With many patients it is a great tax upon time and strength where the means of the patient are limited, to feel that it is necessary to undergo two operations. Neither operation is so critical but what the patient will be able to endure all at the same time.

As a preliminary to all plastic operations we have the vagina thoroughly cleaned, the bowels evacuated in order to remove any scybalous masses that might cause interference with union. The vagina will be cleaned by scrubbing with a solution of creolin and soap in order to remove any material that might possibly infect the wound. The superfluous material will be washed away with sterilized water.

After having placed the patient under an anæsthetic, careful examination is made to ascertain whether it would be necessary to resort to abdominal operation, but by manipulation it is discovered that the uterus can be loosened and a section will be unnecessary. No enlargement of either ovaries or tubes was discovered so that all that was left to do was the plastic operation upon the perineum. Now as you were informed earlier, this fistulous opening projects from just above the sphincter and into the vagina. The perineum, as reconstructed, is defective, so that instead of denuding the surface for a new perineum, we will proceed to split the structure that remains, dissecting the flap upward and carrying it well above the fistulous opening. As the flap is lifted up the incision presents a somewhat crescent shape appearance. Lifting this up, sponging out the parts carefully, I then introduce a suture of kangaroo tendon on either side of the small opening; tying these the opening is secured closely. Sutures are then introduced from side to side, bringing the de-

*Clinical Lecture Delivered at the Jefferson Hospital, March 20, 1894.

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nuded surfaces in apposition, pushing forward the flap to form the posterior wall of the vagina. As the parts are brought in apposition, taking care to sponge out the cavity and remove all blood clots, you see the perineum is again built up, making a good support to the pelvic floor.

The subject of laceration of the perineum is of very great practical interest for the reason that it probably occurs more frequently than any other lesion of the genital tract. It is a lesion that occurs in spite of every precaution that can be exercised, in about 15 per cent. of patients who come to labor for the first time. The conditions which cause laceration of the perineum, are faulty development of the individual; thus, the curve of the sacrum is very marked, or on the contrary, may be slight. In either condition the danger of rupture of the perineum will be increased. The perineum is long, the vulva small, perineum rigid, or the patient may have a large amount of adipose tissue, all of which causes increase the danger of laceration. These are conditions in which the individual is at fault. Then we may have a disproportionate size of the head of the fetus, or it may occupy an abnormal position which increases the amount of tension upon the perineum; occipito-posterior positions or where the head fails to rotate, are causes which increase the danger of the lesion. Then the fetus may have a large head from hydrocephalus. Premature efforts made at delivery of the patient, high application of the forceps, attempts at version, may result in laceration.

The treatment of such a lesion will necessarily depend upon the condition of the individual. Your professor of obstetrics will tell you that in every case in which it is possible, the perineum should be subjected to an immediate repair in order to avoid the suffering to the patient from a defective pelvic floor and the inconvenience of a secondary operation. It should not be forgotten, however, that there are some cases in which an immediate operation would be unjustifiable or unpromising. In those cases in which the woman has been subjected to long duration of labor, where it has been necessary to resort to manual or instrumental interference, the tissues have been very much bruised and lacerated; in such cases the early union would endanger the patient from the defective drainage and the probability of locking up material which would result from sloughing tissues. Even in these cases, however, where laceration has extended into the recto-vaginal septum, sutures may be introduced in such a way as to restore the septum and give control of the sphincter so that a subsequent secondary operation will be much less difficult, and the patient will not experience the great inconvenience until the parts are in such a condition as to permit of their complete repair. The cases in which laceration of the perineum is complete and has extended into the recto-vaginal septum are those which present the greatest difficulty in securing the proper apposition and restoration of the function of the sphincter. Not unfrequently do we see cases in which the perineum seem to be normal in length, but the patient complains of want of control of the sphincter muscle so that she is unable subsequently to avoid the discomfort of the escape of either flatus or liquid feces. In every operation of complete laceration of the spincter, the first object of repair should be the restoration of the function of the spincter as that which gives the patient the greatest inconvenience, and the second the restoration of the perineum.

When we come to the consideration of the treatment of laceration of the perineum the method by which the laceration should be repaired must be dependent upon the particular lesion. You hear of the flap operation, the various methods of denudation and the marked advantages of this and that procedure, but I wish to impress upon you that there is no single operation that is applicable to every individual. The operator should have sufficient ingenuity to fit the procedure to the individual case, and not the case to the operation. You should endeavor to study the necessity and conditions in the case before you, and do such an operation as will insure the most thorough repair and place the patient in the condition nearest that which she had prior to its occurrence. I have repeatedly performed before you various operative procedures, so I will not enter into their further discussion at this time.

I propose to speak of the conditions in this individual besides the laceration of the

perineum, and that is, particularly, the presence of the recto-vaginal fistula. Fistulæ are not infrequent in women as a result of lesions that occur during labor. Possibly laceration may take place through the vaginal septum and in the union of the parts a fissure will remain. Possibly a portion of the septum may be subjected to long continued pressure, which has occasioned a loss of its vitality and it has subsequently sloughed, resulting in a fistula. The discomfort of the patient will depend largely upon the size of the fistulous opening. Thus, where large, fecal matter will continually pass through, being a source of great mortification to the patient and her family. In every recto-vaginal fistula, however, it is important that careful examination should be made of the rectum, for not unfrequently such fistulæ exist as the result of malignant disease in the bowel. A stricture is formed, ulceration takes place above it and gradually opens into the vagina, in some cases the entire contents of the bowel passing through this canal. In a case which came under my observation recently, a woman was sent to me suffering from a large ovarian tumor, such a case as I would without question have advised to submit to an operation for the removal of the growth; but in making careful examination of the case, introducing the finger into the vagina, I found evidence of the presence of fecal matter, and a large opening existed through the recto-vaginal septum. Introducing the finger into the rectum, it was evident that the gut for some considerable extent was the seat of malignant disease to such a degree that it was utterly impossible to hope by an operative procedure to remove it. Under such circumstances, there was nothing for me to do but leave the patient to bear her burden. Sometimes these fistulæ may result from the presence of an abscess in the wall of the rectum, from a suppurating hemorrhoid, or traumatism, so that a small fistulous opening is present.

There are various methods by which such openings may be treated; simply denuding the vaginal surfaces would not be sufficient. If we have a small opening, the better precedure would be to dissect up a flap, as we have done in this case, close the opening by buried sutures and then stitch over it the flap. A vertical incision may be made directly through the opening, dissecting a flap upon either side, introducing the buried sutures, stitching the vaginal flaps over it. This method of treating the case accomplishes giving as little pressure upon the parts as is possible. The buried suture may consist of kangaroo tendon, small catgut or fine silk, using preferably that which is used for operations upon the eye. If this is carefully disinfected by heat, and care is exercised in its introduction, it gives no inconvenience. In some cases where the introduction of the sutures leaves a gaping opening in the rectum, it would be better to introduce sutures in the rectal mucous membrane in such a way as to hold the surfaces in contact to prevent the soiling of the wound until the union has taken place. As we have closed the fistulous opening in the patient upon whom we have operated this morning, and restored the perineum, I do not have the slightest fear of any redevelopment.

I feel that in this patient we have been also fortunate in being able to avoid the necessity of doing an abdominal operation; in other words, to bring about the correction of the displacement without the necessity of subjecting her to abdominal section. The correction of such displacements in all such conditions, is exceedingly important, as where the uterus is retroverted, presses upon the rectum, it gives rise to a congestion of the lower vessels of this organ, particularly where the stump is heavy, producing probability of delay in union, and even not only failure to unite, but sometimes, through the ulcerative process, increases the size of the opening, so that I make it a rule never to perform an operation upon the rectum until I make sure that the rectal disease is not a result of some malposition or enlargement of the uterus.

Incontinence of Urine.

℞

Tincturae belladonnae.....	
Tincturae cubebae.....	ää f3ij
Tincturae nucis vomicae.....	
Tincturae rhois aromaticae, of each....	f3j
Tincturae cascarillae.....	f3ij

12 drops at bed-time for a child from seven to ten years.

A mixture of choloroform (ten parts) ether (fifteen parts) and menthol (one part,) used as a spray, is recommended as an excellent and prompt means for obtaining local anæsthesia, lasting for about five minutes.—*Boston Med. and Surg. Jour.*

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SATURDAY, JULY 28, 1894.

EDITORIAL.

ERRORS OF MEDICAL WRITERS.

Some time ago we read in a religious weekly, which is ably conducted, the assertion that Fielding in one of his novels had spoken of an insane asylum, one of the inmates of which was trying to extract sunbeams from cucumbers. Two great errors were committed by the writer, errors which our readers so readily recognize it is unnecessary to point them out. The writer was a very scholarly man, his life chiefly spent among books, and his making such mistakes would therefore seem highly improbable.

Corresponding errors are not uncommon on the part of medical writers. Errors as to dates, as to persons, and as to priority; one form of the latter is claiming as original that which was done by another years before. Now in regard to the last topic, undoubtedly truths and methods of practice may be re-discovered, for as one of the great philosophic writers has said, "Novelty is only oblivion." Yet in other instances the author has read, or been told that another has said, or devised this or that; the]s go by, and the information has faded from his consciousness, but the fact without its source revives in such a way that it seems an original conception. and so he publishes it. We purposely omit in our consideration those depraved creatures who deliberately steal another's invention, proclaiming it as their own, and who deserve nothing but general professional contempt; they are as bad as the doctors who steal patients, or slander fellow members of the profession, and like them should be sent to Conventry, since there is no penitentiary provided for such culprits.

The errors we shall consider may not involve any great culpability, but still they can hardly be called venial, for a man who assumes the responsibility of teaching the profession ought not to be careless as to dates or persons, and ought to be accurate in his statements when, by careful research, accuracy is possible.

We shall point out some of these errors, chiefly for a reason similar to that given in former times by an English judge, when sentencing a horse-thief, "You are hung, not for stealing a horse, but in order that horses may not be stolen." In an excellent and well-known work upon Obstetrics we read: "Wallace praises vinegar as a certain and safe remedy for *post-partum* hemorrhage." Reference is made to the third volume of the Transactions of the American Gynecological Society. The reader in turning to this volume, will find that the late Dr. Wallace did not "praise vinegar," but this commendation was given in an admirable practical paper upon *post-partum* hemorrhage by Dr. Penrose. In the same work Leyman is referred to in connection with an extraordinary knot of the umbilical cord. Now in some French works the name is given thus, but if the original paper by Read, (*American Journal of the Medical Sciences*, 1861,) be consulted it will be found that the case was reported by the late Dr. George H. Lyman of Boston. We would not refer to these instances if in a review of a preceding edition the errors had not been pointed out; probably the author did not see the review, or seeing it, did not think the errors important enough to correct.

Within the last few years there have been papers in medical journals advocating the application of moist sponge and compression in the treatment of mammary abscess. Before these articles appeared the second edition of Gross's *Surgery* was published, 1862, and in it the following passage, relating to mammary abscess, is found: "Within the last few years, a more scientific mode of management has been extensively pursued in this country, in consequence of the recommendation of Dr. Foster. It consists simply in the application of compressed sponge," etc. The compressed sponge was applied after the abscess was opened and the breast covered with cotton batting; then a bandage was neatly adjusted, and from time to time water put upon the bandage, and of course the sponge thus became swelled, making equal and gentle pressure upon the organ, securing the apposition of the walls of the suppurating cavities, and thus union more promptly than by other methods of treatment. Many American practitioners were employing this method of sponge-treatment more than thirty years ago: but some recent writers seem not to have learned it.

In 1859, Dr. Paul De Lacy Baker, of Eufaula, Alabama, first used veratrum viride in the treatment of puerperal eclampsia as may be seen by referring to the *Southern Medical and Surgical Journal*, September, 1859. But in a recent paper in the Transactions of the American Gynecological Society, it is stated that the first employment of the remedy for this purpose was by a Brooklyn doctor, giving a date some years after Dr. Baker's use of the agent.

A few months ago a practitioner of recognized ability, proposed the use of a French toy balloon for exposure of the fistulous margins in operating for vesico-vaginal fistula. But Foucher (*Gazette des Hopitaux*, 1862,) had anticipated him more than thirty years. The method of Foucher is referred to in the important volume of Deroubaix, *Traite des Fistules uro-genitales de la femme*, 1870. The only difference is that the Frenchman filled the rubber reservoir with air, while the American employs warm sterilized water or Thiersch's solution.

We might continue our list for some time, but it seems unnecessary. If this exposure shall have any good effect in lessening carelessness on the part of medical authors, and encouraging literary research in professional subjects upon their part, its object will be accomplished; its only purpose is, referring to the illustration given to prevent horses from being stolen.

ABSTRACTS.

POSTERIOR URETHRITIS.

Dr. F. Tilden Brown, in a paper with this title, says: Acute posterior urethritis rather a complication than a sequence of anterior urethritis. Some think that the anto-infective agent of gonorrhœa is conveyed from the anterior to the posterior urethra, and other portions by means of the lymph channels. Most observers, however,are inclined to believe that the disease traverses to the posterior urethra by continuity. At any rate, between the 16th and 26th day, an extension generally takes place to the posterior urethra. When the bulbous urethra is filled with pus there may be pressure upon it, by the clothes or otherwise, which favors its continuance. Locomotive engineers, tailors, oarsmen and bicyclists seem particularly prone to this complication. The paucity of glands, lacunæ and follicles in the porterior urethra, as compared with the anterior urethra, seems to offer the best explanation of its frequently escaping infection. He had seen several cases in which the fluid has passed into the bladder during irrigation of the urethra with a Kiefer nozzle. Spontaneous extension of an anterior urethritis to the posterior uretha may be expected in a debilitated person. The subjective symptoms may be at first wanting, and hence the condition may for a time be overlooked, and not be discovered until after the patient again indulges in sexual intercourse, when the sudden reappearance of the discharge may lead him to think that he has suffered a new infection. There is, however, more commonly a sudden development of dysuria and disturbance of the sexual apparatus. Tenesmus is the all-important symptom in posterior urethritis, and there will be urgent demand to urinate, which, if not immediately attended to, will lead to a dribbling of the urine. Spermatozoa may be present with undue frequency in the urine, and lead to a suspicion of the existence of a posterior urethritis. In acute posterior urethritis, instrumental examination is contraindicated. By rectal examination by the finger, it will be found that pressure upon the prostate gland will cause pain and tenesmus. When the affection is severe there may be marked constitutional symptoms. Unless the disease be carefully and systematically treated, there will be frequent relapses. In the treatment the tenesmus must first be relived by the use of suppositories or deep injections of cocaine or morphine. The urine should be rendered nearly neutral, using the benzoate of ammonia when the urine is alkaline, or the bitartrate of potash when the urine is acid. Sandal-wood or salol may be administered internally. After the subsidence of the acute symptoms, deep urethral injections of very weak solutions of nitrate of silver may be employed. In chronic posterior urethritis the amount of disturbance is quite variable. In what proportion of cases the gonococci cease to exist is not known, but all such cases should be looked upon as suspicious. To determine whether or not a case is still capable of carrying infection, it may be necessary to produce an exacerbation of the disease by the introduction of an irritating solution, for it is well known that gonococci are much more numerous during such an exacerbation. The subjective symptoms are similar to those of the acute form, except that tenesmus is usually absent. The existence of the "comma" thread in the second urine glass is strongly suggestive of chronic disease of the posterior urethra if disease of the anterior urethra can be excluded. If disease of the anterior urethra cannot be excluded, this portion of the canal should be thoroughly irrigated, then the first passage of urine would indicate the condition of the posterior urethra. Deep pressure over the membranous urethra and perineum is more likely to show tenderness than digitali examination of the rectum. Here the urethoscope is exceedingly valuable. At the first examination the lesion is exposed, and a 3-per-cent. solution of nitrate of silver applied by means of a specially devised syringe with a cotton tip. This treatment should usually be repeated after two or three days. When the submucous layers are infiltrated, absorption will be promoted and better results obtained by the use of iodine.—*Jour. Cut. and Genito-uri. Dis.*

THE INTERNATIONAL SANITARY CONFERENCE OF PARIS.

The International Sanitary Conference of Paris, which has just closed a two month's session, marks another advance in the progress of state medicine. This was the seventh similar conference, but the results of its work are to prove far more important than any of its predecessors While other conferences have con.idered questions more immediately relating to cholera in Western Asia and Eastern Europe, this Conference grappled with the more difficult subject of preventing the transportation of the cholera infection from India by the pilgrims to Mecca.

This problem is beset with difficulties from whatever side it is approached. On the one hand are the religious superstitions of the Musselmans that render them intolerant of any control; on the other are the jealousies of local governments, which make them resent any interference with their subjects by other powers, and, finally, there are innumerable complications arising from European territorial and commerical interests. It appears, however, that the Conference was able to solve all of these perplexing difficulties, and formulate an international series of regulations upon which the states represented will finally be able to unite.

Great credit is due the French Government for its persistent effort to secure international co-operation in the prevention of the spread of cholera. It called the first Conference as early as 1851, for the purpose of securing a uniform system of quarantine, but the results were not attained. In 1859 it attempted to secure a Conference, but the draft of the convention was not acceded to. In 1866 it succeeded in having a Conference of all the States of Europe, Egypt and Persia, at Constantinople, where many of the questions relating to an international agreement on methods of preventing cholera were discussed. But the time had not arrived for the adoption of the regulations proposed, and the Conference failed of immediate results. But it is apparent that there was a much nearer approach to an agreement than heretofore. Three Conferences have since been held, viz., at Rome, Venice, and Dresden, all of which resulted in agreements as to the methods of dealing with cholera in Europe. Finally, the Government of France called the present Conference, and its programme brought prominently forward the question of an international agreement on regulations governing the pilgrimages to Mecca.

The results arrived at were the adoption of regulations which place the pilgrim under strict sanitary care from his departure to his return home. He must first secure a sanitary passport from the local authority, giving full details as to his person and locality; at the port of departure he must be detained for cleansing and disinfection; he can embark only on pilgrim ships; these ships must have a qualified physician, ample space, pure water, good food, a disinfecting apparatus hospital accommodations, etc. ; island stations are provided, having every necessary appliance for cleansing and disinfection, where the pilgrims debark and undergo cleansing, as also the ship. At Mecca the pilgrim is under rigid surveillance, and on his return receives another passport stating his condition. The code of regulations is very minute, and if they are enforced in good faith would seem to render it impossible for cholera again to spread from India along the routes of the pilgrimages as heretofore.

We learn that the delegates from the United States endeavored to have the delegates from the Conference add to its programme the closely allied subject of the prevention of the spread of cholera by emigrants from Europe to the United States. The suggestion was favorably received by the Conference, but as the delegations were selected for the express purpose of considering the pilgrimages of the Musselmans, it was decided to postpone the emigrant question to a future Conference. It is greatly to be regretted that this Conference could not have included the emigrant with the pilgrim, for the larger number of the regulations made for the latter would apply to the former. Every emigrant from Europe to the United States ought to be required to obtain a sanitary passport from the local authority, setting forth the health of the locality and other details as to the cleanliness of his personal effects, freedom from all forms of infection, etc. Without this passport he should not be allowed to embark for this country. At the port of departure he and his baggage should undergo the same cleaning and disinfection.

SOCIETY REPORTS.

LOUISVILLE MEDICO-CHIRURGICAL SOCIETY.

March 23, 1894.

[STENOGRAPHICALLY REPORTED BY C. C. MAPES.]

SYMPATHETIC OPHTHALMIA.

DR. WM. CHEATHAM: This little boy seven years of age, a year ago last November was struck in the right eye by a piece of steel, splitting the cornea, resulting in a cicatrix extending all the way across the cornea, and adhesion of the iris the full length of the wound above and below, with complete closure of the pupil. One year afterward the left eye began to be disturbed. About Christmas there was considerable inflammation in the left eye; this progressed until there was only perception of light, with occlusion of the pupil, with almost total posterior synechia; the iris in some places, where it is not entirely attached you will see the aqueous humor in the posterior chamber pushing it forward. This case brings up several points of interest in which I would like to have the help of the occulists present. One question now, is whether the injured eye is not going to be the better of the two? He now has quick perception of light in both eyes; in passing along the street he can tell when he comes to the gas lights, etc., and can avoid running into objects or persons without any trouble. Ten days ago I took out a small section of the iris of the right eye and also did a small iridectomy on the left. As is usual in these cases, the iridectomy wound was entirely closed in the left eye. This is about the only form of iritis in which we cannot make a satisfactory artificial pupil and for this reason I would advise to wait for months or sometimes years before trying surgery in a sympathetic irido-cyclitis—if you make an iridectomy it will almost invariably close. I believe the time for enucleation of the right eye in the case before us has passed, as by the sympathetic involvment of the left eye the right will likely be of the most service; while it is small and partially shrunken I think it would be of considerable service if we could only get a pupil. Another point in regard to operating on the right eye is whether any lens is present; of course it is uncertain whether the lens is in position. If we could be sure that the lens is intact, then an iridectomy would be the proper procedure; if not an iridotomy would have been the better.

The case brings up another question as to the cause of sympathetic ophthalmia; I do not think professional opinion is at all settled. Whether it travels along the optic nerve, the ciliary nerve, whether it is microbic, or what is the origin of sympathetic ophthalmia. All theories may be correct; one in a given case and another in another. The question comes in here whether it is possible to have sympathetic opthalmia without an opening in the eye-ball. My own opinion is that we can, because we have it in cases in which there is absolutely no history of trauma. I have seen a case where the ciliary body was involved, where the eye was diseased as a result of syphilis, and sympathetic trouble set up in the other eye, where there had been no opening whatever through the sclera. Of course that decides against the theory of the microbic origin of sympathetic ophthalmia, because unless we have a broken surface the microbe cannot enter. In these cases though it is contended that there is a microscopic tear in the surface through which the microbe enters, and thus we have sympathetic ophthalmia.

Knapp divides these cases into "sympathetic irritation" and "sympathetic inflamation," and states that irritation gets well, but the cases of inflammation do not get well. I cannot agree with this statement, as I have seen a great many cases of inflammation get well.

The most remarkable case that I ever saw, was one in which the man could scarcely tell daylight from darkness. I saw the case with Dr. Vance, and under local anæsthesia we enucleated the bad eye and with treatment the patient se-

cured vision of $\frac{20}{30}$ in the remaining eye. I read a report of a case recently where a man had gotten vision of $\frac{20}{20}$. I saw a case with Dr. Dabney some time ago in which the result was vision of $\frac{20}{20}$. These were all undoubted cases of sympathetic inflammation.

There is another point of interest in the case of the little boy before us. Of course we all recognize that enucleation of the injured eye in the beginning would have been the proper thing, still there are some dangers in enucleation; the danger of anæsthesia, some danger of sepsis, hemorrhage, meningitis and death. I have seen two cases of very serious hemorrhage the result of enucleation of the eye. Dr. Cartledge will remember having seen with me two cases of acute insanity following enucleation of the eye. Sometimes erysipelas and panophthalmitis follow as a result of enucleation. Cases of death following enuclation of the eye are not at all common, although we must admit there are some serious dangers connected with the operation. I have seen a series of 500 to 600 cases reported without a single death. Another operator reports 600 cases with only one or two deaths.

I would like for the Fellows to examine the eyes of this little patient and make any suggestions they may be able as to what ought to be done. The case is particularly interesting to me because I have at present six cases of recent trauma with just such injuries as this, in which the question comes up whether enucleation should be done or not. One is in the person of a child eighteen months of age who inflicted an injury to its eyes with a pair of scissors. Another a child brought to be from Indiana, injured her eye while at school with a pencil. As I have said I have under observation now six cases of recent trauma in which the question of enucleation of the eye comes up. I know some of you may say wait for a while and see if any sympathetic trouble sets up; if this is done it may be neglected until it is to late for enucleation. I believe however that this would be wise if the patients could be kept constantly under observation, because we have a period of sympathetic irritation just preceding inflammation. In the case I have mentioned of the child eighteen months old, there is no sight in the affected eye, it is soft and has shrunken fully one-third, the eye being about two-thirds its normal size.

DISCUSSION.

DR. S. G. DABNEY: I agree with what Dr. Cheatham has said, that the time for operative measures in the case presented has passed so far as the eye originally injured is concerned. I certainly favor leaving the injured eye in this case, as I believe the chances of vision are more favorable than in the sympathic eye, in view of the fact that the iridectomy upon it has remained open better than that upon the sympathetically inflamed eye. Outside the case presented by Dr. Cheatham, the subject is extremely interesting and one of great importance. In enucleation for panophthalmitis Noyes after reviewing the whole subject thoroughly, gives the proportion of deaths, one in 4000. Different writers differ widely as regards the advisability of enucleation during acute panophthalmitis. Fuchs in his recent book advises against it. Most American writers as far as I am aware rather favor it. Roosa in his edition of Shmidt-Rimpler's work, states that results from operative measures in acute panophthalmitis are in most instances very satisfactory. The case Dr. Cheatham refers to which he was kind enough to see with me possessed a great many features of interest.

It was the only case of suppuration I have had in operation for cataract. The patient was a lady sixty years of age. Her general health was bad. I had an analysis made of the urine before operating, always feeling somewhat anxious about the case and had some hesitancy about operating, but the examination revealed nothing abnormal. The operation itself seemed to be according to rule as far as that was concerned. The next day she could count fingers easily and there was no pain or other disturbance. Forty-eight hours afterward the suppuration began. Possibly her own imprudence the night after the operation had something to do with it. She passed water perhaps a dozen times during the night, and insisted upon getting up. Panophthalmitis followed and I rather advised enncleation, I did not however, urge operation because many writers on the subject advise that removal of the eye should not be done during an acute panophthalmitis, because of the danger of meningitis and because the dan-

ger of sympathetic ophthalmia following such inflammation is very slight. The patient was unwilling to have the eye removed and asked to have another opinion. Dr. Cheatham and myself consulted in regard to the case, and agreed considering the very slight danger of further trouble, and considering the patient's own wishes, that we would leave the panophthalmitis eye. The case went on without any unusual result for six weeks. She was suffering very little pain, being built up with tonics, etc., in the meantime. Six weeks later she came to my office, saying that three or four days previously she had begun to have pain in her good eye. An examination showed at once that she had an iridocyclitis or iridochoroiditis. In view of the fact that Dr. Cheatham had seen the case previously I asked that he again be called to see her. Of course the only indication was removal of the stump of the panophthalmitis eye, and we advised that this be done immediately. This was late Saturday evening and the patient had then been suffering with sympathetic inflammation for at least four days, but as she did not understand the gravity of the case I was not called earlier. I removed the eye on Sunday morning twelve hours after seeing her; the inflammation subsided immediately and she now has perfect sight in the other eye being 20–20. That was certainly a case of sympathetic inflammation which we have every reason to believe was cured by removal of the offending eye. In regard to operative measures when sympathetic inflammation has already begun or existing and the patient still retain sight—the rule is not to remove the first injured eye, because as Dr. Cheatham has said, often the ultimate vision in this eye is better than the one subject of sympathetic inflammation.

Dr. J. M. Ray: The question of sympathetic ophthalmia and the kind of eye troubles likely to give rise to sympathetic ophthalmia, is an extremely interesting one. We are all agreed that injuries to the eye, especially injuries involving the cornea with adhesions of the iris, or wounds involving the cilary body, are the conditions which are liable to be followed by or give rise to sympathetic ophthalmia. As to whether sympathetic ophthalmia follows any inflammatory disease of the eye without rupture or perforation of the eyeball, is a disputed question. The accepted teaching of the present time in reference to the cause of sympathetic ophthalmia, is that it is microbic in origin. Deutschmann has made some very interesting experiments on this subject, and most authorities agree with him, and if his experiments and statements are true it is impossible to have a sympathetic ophthalmia without rupture of the eyeball.

At the meeting of the American Ophthalmological Society last summer, Dr. Knapp reported a case of sympathetic ophthalmia resulting from a wound of the eyeball with a dislocation of the iris under the conjunctiva without any external wound; after reporting this case in discussing the subject he made the statement that it was the first time he had seen sympathetic ophthalmia follow without an injury of the external coats of the eye. It seemed to be the opinion of those present that sympathetic inflammations were not liable to follow unless there was an injury to the eyeball giving rise to perforation.

Dr. Cheatham will remember seeing a case recently which I have under observation for several years. A young lady came to me three years ago with a small circumscribed spot of chroiditis which has gone on from bad to worse. The inflammation extended form the choroid to the ciliary body producing extensive cyclitis; from that it extended to the iris, but the external tunics were still intact. When I first saw her an examination of the other eye showed one or two small spots on the choroid with one considerable side spot extending far out just back of the lens. She began to have some little sensations referable to the outer eye. Things looked steamy at times. She went on this way for probably six months with the sight of the other eye remaining as good as formerly. Meantime she went to Chicago and consulted her brother (an oculist), who saw the case at about the time when the inflammation was worst in the first eye; he sent her back here and asked me to take charge of the case and institute any treatment I thought necessary. I did not look upon the case very favorably and thought she would probably lose the eye. A month or six weeks afterward the patient decided to have the eye removed. I took the eye out. The other eye is just about the same as before.

If the teaching with reference to the cause of sympathetic ophthalmia is correct, it would seem that it is impossible for this this condition to occur unless there is a rupture of the eyeball.

In regard to enucleation during panophthalmitis: I have done this in two cases, and the patients seemed to do just as well as they would under other circumstances. I know objections have been raised to the procedure, but I would not hesitate to enucleate the eye during panophthalmitis, if the indications of the case demanded it.

DR. WM. CHEATHAM: Referring to the case which Dr. Ray states I saw with him where the patient had cyclitis and iridochoroiditis: Books state that the thing which produces sympathetic ophthalmia is disease of the ciliary body. That patient certainly has a diseased conditlon of the ciliary body.

To show that Dr. Ray is mistaken in his remarks in reference to Dr. Knapp's paper and discussiou of the same, I will read the following extracts from that paper and discussion, from the transactions of the Society before which the paper was read.

Dr. Knapp says: "That this accident, twenty-five days after the injury, led to the development of typical sympathetic ophthalmia, is not unprecedented if the cases of subconjunctival dislocation of the lens are included in this class of injuries."

"DR. O. F. WADSWORTH, Boston: I should like to speak of a case which was a very melancholy one and which occurred some ten or twelve years ago. In this case a spit-ball blown from a toy gun ruptured the sclera in the ciliary region without rupture of the conjunctiva so far as I could make out. The boy was twelve years of age and an only son.

"He came the next day after looking out of the window at the bright sun. There were numerous dots on the membrane of Descemet, the pupil was sluggish and atropine showed posterior synechiæ. The other eye was enucleated the same afternoon, but he lost sight in the remaining eye within a couple of days. There had apparently been no wound in the conjunctiva and no tenderness on pressure."

"DR. J. F. NOYES, Providence, R. I.: wish to relate the history of another case in which I was in doubt what to do. A young man playing base-ball was hit by the ball on the cheek bone and stunned, but I did not see the case until three weeks afterwards. He then came on account of failure of vision in the eye on the injured side. I also found symptoms of sympathetic trouble in the other eye. I advised enucleation of the first eye, but to this he did not consent. He became totally blind, but neither eye showed any great amount of inflammation. The question arises whether or not the second eye would have been saved if the first had been removed?"

"DR. HERMAN KNAPP, New York:—With regard to this case, there was an unbroken conjunctiva. There are in the whole realm of literature only a few of these cases where sympathetic trouble followed where there was an unbroken conjunctiva.

"Sympathetic ophthalmia following a non-penetrating wound is so rare that Boé gives the rule that under no condition need an eye be removed where there is no external injury. That was the case here. I do not think that any one of you have seen sympathetic ophthalmia without an external lesion of the eyeball. It is a process of bacterial origin. Nevertheless there are six cases, and this is perhaps the the seventh, where there was no external injury."

"DR. SAMUEL THEOBALD, Baltimore.—Dr. Knapp has stated that there are only six cases recorded of sympathetic ophthalmia following injury to the eye without external wound. This, perhaps, may be true, but I think that there have been many cases reported of sympathetic ophthalmia where there has been no wound at all, where there has been inflammation of the ciliary body or deeper structures of the exciting eye without traumatism."

"DR. J. F. NOYES, Providence, R. I.—Will Dr. Knapp explain the case that I have just reported where the blow was received on the cheek without injury to the eye, and there was little or no appearance of inflammation in the eye, yet sympathetic trouble followed?"

I have certainly seen cases where there was no injury to the eye and yet sympathetic ophthalmia developed. I still believe that it is possible for this condition to occur without an opening in the eyeball.

DR. S. G. DABNEY: Homor, of Zurich, whose clinical experience in this direction was probably as great as that of any-

body in the world made the statement that sympathetic ophthalmia possibly may occur without an opening in the eyeball, but these cases or instances are very rare. He is in full accord with the theory that these cases are microbic in origin, but states that they may occasionally occur without an opening in the eyeball which can be detected.

ABDOMINAL TUMOR.

DR. A. M. CARTLEDGE: This patient is Mr. H., aged forty years. He has an abdominal growth or displaced viscera, but which I am not yet able to say. The enlargement was first noticed when he was eleven years of age, while being treated during an attack of typhoid fever. Prior to this he received a severe kick about the center of the abdomen (when seven years old) by a mule. When twenty-two years old he suffered with an attack of what was termed congestion of the liver and stomach. He was in bed between three and four months, and was an invalid for a year subsequent to that time; had hemorrhage from both the stomach and bowels on that occasion. After that he occasionally, especially during the summer, suffered from severe bilious attacks, so-called. When thirty-two years old he had the second one of these attacks of congestion of the liver and stomach. Three years ago he had an attack of decided jaundice. Since he was eleven years old he says that he has never been able, on his farm in Virginia, to do any work requiring him to bend over, on account of the soreness which has always been present and the inconvenience caused by assuming a stooping position, and at times he would have this uncomfortable soreness when not attempting to stoop.

The latter part of July I was called to see Mr. H., suffering from intense abdominal pain which was very vague as to its seat. There was some little constipation but the attack had come on with great nausea and vomiting. In examining the abdomen I discovered this enlargement and called his attention to it. There was considerable swelling of the abdomen, tympanites and pain, requiring the administration of morphine for its relief, lasting for about twelve hours. There was some jaundice during this attack, but no especial tenderness referable to the region of the liver. The greatest point of tenderness was immediately over this enlargement. After resting a few days in bed, he was able to get up and walk about, but in August had a recurrence of the pain. He recovered from this attack very slowly; the jaundice, however, quickly cleared up and after two months sojourn at several watering places, he finally got back to his normal condition. Since that time his health has been fair; he has not lost much in flesh, but still has this tenderness on bending, and the question in the case is simply one of diagnosis as to the nature of the trouble. There is one point which may be of some diagnostic value, and of some assistance. For a number of years he remembers distinctly that this enlargement was possessed of great mobility which has been gradually diminishing until the present time it is more or less fixed in its situation.

DISCUSSION.

DR. J. A. LARRABEE: From the examination I made of this case, I believe it is a detached or wandering spleen caused by the kick of the mule.

DR. J. W. IRWIN: I find that there is no dullness on percussion in the region of spleen, or where the spleen ought to be, but there is dullness on percussion over the left kidney and over the region of the liver. I believe it is a displaced spleen and that it is attached to the mesentery. The hemorrhages that he has had and other troubles may be readily explained by the enlargement of this organ and its dislocation.

DR. J. B. MARVIN: The tumor is certainly behind the gut; it is not the shape of a kidney, and I am inclined to the opinion that it is the spleen.

Dr. J. M. Ray presented a paper on

ADENOID GROWTHS IN THE DOME OF THE NASO-PHARYNGEAL SPACE.

(See page 74)

DISCUSSION.

DR. WM. CHEATHAM: The paper is such a thorough review of the subject up to date that there is very little left to be said. I would also like to add to the paper that diseases of the ear are the most serious complications or dangers from adenoid

growths. Another serious feature is obstructed respiration. The nose is not only intended for olfactory purposes, but also for filtering the air and rendering it more moist. It is said that even the coldest atmosphere passing through the nose, by the time it reaches the larynx is heated to nearly the body temperature. Unless the air is filtered and heated, and unless it is rendered properly moist when it enters the lungs, it is impossible for the proper interchange of gases to take place, as between oxygen and carbonic acid gas. So the question of removal of adenoid growths is not only important from the fact that they are frequently the direct cause of ear troubles, but it is also important in order to secure nasal respiration. Air entering the lung through the mouth, cold, not moistened, not filtered makes it impossible for the proper interchange of gases to go on.

I differ with Dr. Ray in regard to anæsthesia: I do not think I have ever given general anæsthesia to remove growths of this character. I put a gag or cork in the mouth, get some one to hold the patient, then under local anæsthesia removal of the growths can be easily and quickly accomplished. I am afraid of general anæsthesia in these cases since I saw a death in the London Hospital resulting from cocaine, where a child was to be operated upon for adenoid growths.

DR. S. G. DABNEY: Referring to Dr. Cheathem's remarks: I differ with him in regard to the anæsthesia—in young children we ought to give chloroform. I recently operated upon a child who had been operated on in another city for adenoid growths without anæsthesia, and I found quite a large mass remaining which was thoroughly removed with the curette under anæsthesia.

As regards age: I have operated upon children two and three years old, and a number from fifteen to twenty years old. In older children or half grown people, I am in the habit of drawing the palate forward by means of the palate retractor, then passing a curved probe around it and applying cocaine with a pledget of cotton (not the spray) removal may sometimes be accomplished without general anæsthesia.

I believe it to be a fact that many cases such as Dr. Ray describes are overlooked; they may present symptoms not quite so marked as he mentions; there may be no ear symptoms and not much mouth breathing. I recall one just now; a child was brought to me with a symptom which has not yet been mentioned—vomiting in the morning before, and sometimes during breakfast. He also had obstructed breathing. An examination with the finger showed that there was a mass of adenoids in the roof of the mouth. They were scraped away, and as a result the vomiting, obstructed breathing and all symptoms were relieved. The vomiting was probably caused by the mucus and discharges which had accumulated about the adenoids over night and was loosened by the warm food at breakfast.

Suppuration of the middle ear may often be the result of adenoid tissue in the roof of the mouth. I recently operated upon two such cases in the same family. It is my custom to always make a thorough examination and search for adenoids in every case of suppuration of the middle ear, and in operating for these growths I invariably give chloroform, in small children.

DR. J. A. LARRABEE: From the standpoint of the general practitioner: The statement made by the essayist that a spontaneous cure may be looked for by arrival at adult years, would at first sight seem to lessen the importance of attending to it in childhood. That importance is increased, however, when we consider the consequences that may accrue from such conditions. I am satisfied that in my earlier practice I did not fully appreciate the condition under discussion, and saw many cases of incomplete development of the chest, and the prow or pigeon breast, and some with curvatures and deformities of the shoulders due to this adenoid condition, which I did not then recognize. When we come to consider the consequences of improper breathing in children from three to fourteen years of age just spoken of by the essayist, we find that while the disease admits of spontaneous cure with growth and development, the consequences produced are not relieved.

I was somewhat surprised to learn that in the Johns-Hopkins Hospital recently some thirty cases were found in the ordinary run of clinics operated upon for adenoids, the usual method being without instruments; the patients being

young and the growths soft, they were removed with the finger nail. I am satisfied that the percentage spoken of by the essayist is in moderation. I believe these cases are more frequent than are recognized. One of the most noticeable symptoms of adenoid growths is the facial expression; if there is anything that can be diagnosed by physiogomy, it is the condition under discussion.

Dr. J. B. Marvin: I think the general practitioner in the city who does not look in the throat nowadays, as well as examining the mouths of all male children has no excuse, as he has certainly heard enough about such conditions. There is one point I think Dr. Ray did not make strong enough. It seems to me that we can make a second division very clearly in these cases, and in the worst class there is not only adenoid growths, but an arched palate, a narrow jawbone encroaching upon the fauces. That seems to me to be a more serious form and more likely to be associated with pigeon or chicken breast than the other.

There is another point in regard to the etiology: Six months ago a child was brought to me for another trouble; a handsome little fellow, and I noticed that he had the habit of jerking his head back. Upon interrogating the mother, she said he was born that way, that he had a "death mark." She having seen a woman die while pregnant. Upon examination the trouble was found to be well-developed adenoid growths, the removal of which corrected the habit.

Dr. W. O. Roberts: I have had two cases of the nature under discussion, both of which were operated upon by Dr. Ray. The point brought up by Dr. Marvin, the narrow jawbone with arched palate, was very marked in one case, less so in the other. Both patients had trouble in the hearing, and in one of them the hearing was very markedly interferred with; not only was the child subject to frequent attacks of otorrhœa, but it was accompanied with severe pain. Since the operation was performed there has been no trouble in any respect in either case. In both cases there was a very marked improvement in the general health. In the case where there was a purulent discharge, the mother could always tell when it was coming on, by the fact that the ear would become very red; the next day it would have intense earache, then directly afterward discharge from the ear would be noticed. Chloroform was given in both cases, and I was struck with the ease with which the operation was performed.

Dr. J. L. Howard: The question that Dr. Roberts has brought up concerning the giving of chloroform in cases of this kind is of great interest to me. I have administered chloroform in six cases for removal of adenoid growths, rather two cases in which there were polypi of the nose and a great deal of hypertrophy in this region, and four cases of adenoid growths, and I have always had trouble in giving the anæsthesia; I came very near having three deaths. I have probably given chloroform three hundred times for different operations, and have experienced no trouble except in the six just mentioned. It may be on account of the obstruction in this region, and I have never administered the anæsthetic for this condition without a great deal of fear.

Dr. H. A. Cottell: About a month ago Dr. Ray and myself went out to operate upon a little boy three years old who had adenoid growths, and who had all the symptoms the essayist has so graphically described. I was particularly struck with the wonderful facility with which the operation was done. The patient was put profoundly under the influence of chloroform, and the adenoid vegetations were scraped out with such speed and facility as to excite my admiration. The operation was practically completed in a few seconds. Hemorrhage was free for a time, but soon subsided. I have seen the patient several times since and I find the result perfect. It seems to me that an operation for the removal of such growths should not be undertaken without an anæsthetic.

Dr. J. M. Ray: When I first commenced operating for adenoid growths I probably did about half my operations without an anæsthetic. Where we have a child from nine to ten years old, rather tractable the operation may be done without an anæsthetic by means of the curette.

The specimen which I show you of adenoid growth was removed from a child eleven years old. The trouble dates back to an attack of diphtheria. When the child was five years old he suffered quite a severe attack of nasal diphtheria, and it was thought there was paralysis of the soft palate, It was treated by spraying,

washes, etc., with little or no benefit. The most marked symptom was mouth breathing. I sprayed the throat with cocaine, and with the heart shaped curette which I show you at the second attempt brought the adenoid growth away. In young children two or three years old, I think it is always best to give an anæsthetic, as the operation of necessity is somewhat painful. The rush of blood is usually quite free at first but soon subsides, and I have had no after effect whatever from the operation. I have very often removed these growths without the aid of any instrument, simply using my finger nail.

CONTINUED DISCUSSION OF APPENDICITIS.

DR. A. M. CARTLEDGE: At a meeting of this society four weeks ago, I exhibited three appendices illustrating three stages of the pathology of appendicitis. The first was the result of an operation that day, the appendix showing a stenosis commencing about half an inch from the base, with the extremity very much enlarged and distended with liquid feces. I split open the appendix in order to demonstrate the point of narrowing which I thought was of considerable interest. Second a necrosed stump where the appendix had almost entirely disappeared, and third a large perforated appendix. It seems that the appendix which was slit open excited the most discussion, the others having apparently been overlooked.

In view of the various opinions held by members of the society, I think the suggestion made by Dr. Vance that we exhibit before this meeting such appendices as we may have preserved in order to illustrate the pathological conditions, an excellent one. I have accordingly brought twelve specimens for examination, which were all I could get hold of to-day. There were two or three other appendices that I wished particularly to present, but they could not be located in my hasty search among other specimens. One very pretty specimen showing volvulus of the appendix with rupture, was lost in removal.

I have very little to add to what I have already said on the subject; the specimens themselves illustrate the different pathological conditions, and by an examination I believe you will all agree that all of them bear evidences of pathological conditions demanding operation. Perforation had occurred in nearly every case as will be seen by the specimens, abscesses had formed in most of them and pus was present in all except one; that was the case reported four weeks ago where there was stenosis and distal distension. Many of the patients had been subject to recurrent attacks of undoubted appendicitis, a few were operated upon *in extremis*, others a few hours after the first symptoms developed. One case was treated several weeks for typhoid fever before diagnosis of appendicitis was made. In only one case, I believe, have I found fecal concretions, and have never encountered a foreign body in the appendix.

DR. TURNER ANDERSON: What has been your percentage of recoveries?

DR. A. M. CARTLEDGE: I have had twenty-two cases of appendicitis up to the present time, with four deaths. This number includes cases of general septic peritonitis the result of appendiceal disease.

DR. T. L. MCDERMOTT: Of the twelve cases represented by the specimens before us, how many died?

DR. A. M. CARTLEDGE: Three died out of the twelve.

DR. A. M. VANCE: I have here eighteen appendices, part of which were removed by myself, the balance by Dr. W. C. Dugan. I will not take time to refer to the cases in detail with the exception of one or two. The specimens all bear evidence of a pathological condition demanding operation, and this I think will be apparent by even a casual examination.

At the last meeting of this Society the case of Mr. T. was mentioned by Drs. Anderson and McDermott: I would ask the privilege of reading the report of that case which was made to this Society the day after the operation, and the discussion, showing that pus was present and the perforation in the appendix was seen by all those who witnessed the operation or subsequently examined the specimen.

"FROM REPORT MEDICO-CHIRURGICAL SOCIETY, MARCH 17TH, 1893. CASE OF APPENDICITIS—OPERATION—DEATH.

DR. A. M. VANCE: I was called by Dr. McDermott yesterday at three o'clock to see a gentleman; German, forty-nine years of age; very fleshy. He gave the history that in January he had some bowel trouble

which yielded to castor oil and he recovered. In February he had another attack preceeded by diarrhoea which was relieved. For a week prior to the time Dr. McDermott was consulted (he was called sixteen hours before he asked me to see the case) the man had been feeling a little "out of sorts" but he thought it was an attack similar to those he had formerly suffered with and kept around attending to his business. At five o'clock Wednesday afternoon he was taken suddenly with great pain in the abdomen, and he got up-stairs with difficulty and went to bed. Dr. Geo. F. Simpson was called in and gave the man a hypodermic of morphine. Dr. McDermott came several hours later and found the man with marked symptoms of shock; he made diagnosis then of probable appendicitis. It was necessary to administer more morphine on account of the severe nature of the pain, salines were given without result, pulse gradually increasing in frequency, temperature 103° F. at one time. I saw the patient at three o'clock yesterday; found temperature 101½° F. pulse 120; abdomen very much distended over the whole area of the peritoneum, tenderness being particularly referred, however, to the McBurney spot. We advised an operation at once.

Drs. Roberts, Kelly, and Anderson afterward saw the case. Last night at seven o'clock the abdomen was opened; an incision was made between the anterior superior spinous process of the ilium and the umbilicus, the man was very fat, fully three inches of adipose tissue being encountered before the true wall was reached. As soon as the peritoneum was punctured pus came out in considerable quantities. With some little difficulty the appendix was found and removed. At the time of the operation the man's pulse was 128. The appendix was quite small and as it was lifted out the distal end was torn and separated, but before it was torn Dr. Roberts and I detected a perforation about the size of a match in the lower portion. The two pieces of appendix have been carefully put together by Dr. Anderson and you can plainly see signs of great localized congestion and make out the perforation. The appendix between this congested end and the cæcum was very small and white. The man had general suppurative peritonitis, rupture having taken place probably at five o'clock day before yesterday afternoon when the severe symptoms developed.

This instance shows how treacherous these cases are and how important it is to make early diagnosis if possible, so that relief may be obtained by sergical procedure. I have operated twice recently where perforation of the appendix was about to take place and the patient recovered; I have operated twice where perforation had already taken place and both patients died. This man died four hours ofter operation in shock. He secreted very little urine for several hours prior to operation, and two hours after the operation had been performed I catheterized the bladder and drew off about an ounce of urine; I examined it and found albumen.

DISCUSSION

DR. T. L. MCDERMOTT: Dr. Vance mentions two cases of appendicitis in which he operated before perforation took place and in which the operation was successful; also two cases in which perforation had taken place which were not successful. This is the point I want to call attention to. I have had in the past week two or three cases of colic in which there was evidence of as much distress as this patient had. I have frequently had cases of colic in which there were symptoms apparently just as severe as have been found in cases where appendicitis has been made out, and where peritonitis has followed, and it has been a serious question in my mind whether often in cases where appendicitis has been diagnosticated, they were not purely cases of colic. While this man had the general symptoms of appendicitis, still owing to his having had several similar attacks and owing to the peculiar condition of the patient, I did not feel that I was justified in saying so positively and advising operation. I do not believe if Dr. Vance had been present when I first saw the patient, he could have said positively that it was appendicitis. The question is whether it is wise to recommend an operation as serious as a laparotomy in cases that may prove to be nothing more than ordinary colic. I am sorry, now, however, owing to the final outcome of the case, that Dr. Vance did not see the patient with me earlier in the attack; still as I had treated this patient in several

similar attacks, I had no reason to believe that relief would not follow ordinary treatment as has been the case on previous occasions. How can we discriminate in these cases between ordinary colic and appendicitis when the symptoms are often identical? The responsibility is very great and certainly it would be a mistake to go into the abdomen in ordinary colic. It is a serious question in my mind whether laparotomy is indicated in these cases. I do say frankly however, that in the two cases upon which Dr. Vance operated I believe the result would have been the same with or without operation. While I am a little chaotic in regard to these cases I believe in another case I shall summon consultation earlier, but in the case reported I do not think operation would have been successful had it been performed earlier. The operation was performed twenty hours after the seizure, four of which were necessarily lost in the attending consultations and subsequent preparations.

DR. TURNER ANDERSON: In the case reported I do not see how it would have been possible to have made a diagnosis that would have justified a laparotomy earlier than was done, especially as the patient was able to be up and attend to his business only a few days prior to his death, and further as he had been subject to frequent attacks of abdominal trouble which yielded promptly to ordinary treatment.

DR. A. M. VANCE: I do not believe it is ever possible to tell just exactly the condition we will encounter when the is opened, but I do think diagnosis can be made with sufficent accuracy to justify operation in nearly every case. Drs. Anderson and McDermott in my opinion, have both laid too much stress upon the dangers of a lapartomy. It is now a well established fact that laparotomy in competent hands and under favorable surroundings is a comparatively safe surgical procedure, and the operation performed last night had it not been for the patient's serious condition, could have done no possible harm. Therefore, I think in the not far distant future all of these cases will be operated upon in the stage that Dr. McDermott first saw this patient. I believe these cases ought to have the benefit of the doubt, and a laparotomy be done for the purpose of diagnosis; I believe that this will eventually be the practice.

In regard to the differential diagnosis I would not be so presumptious as to say positively in every case that I could tell exactly the conditions that would be encountered when the abdomen was opened, but I cannot think of anything else but perforative appendicitis or perforation of the bowel owing to some other cause that would produce general peritonitis so quickly in the male except traumatism. Of course the perforation of typhoid fever, is not considered in this case, as there is no such history. Dr. McDermott made the diagnosis of appendicitis when he first saw the patient and I firmly believe if operation had been performed then, the chances would have very favorable for recovery.

(DR. VANCE CONTINUED.)

In the discussion two weeks ago, the question was asked as to how many cases of appendictis had probably been treated by the different medical men in which the diagnosis was never perfected, the patients died and the deaths ascribed to *peritonitis*. Dr. A. M. Cartledge and myself in the last few days have looked over the Health Officer's statistics and death reports and we have found recorded in the last twenty-three years 168 deaths in males from acute peritonitis, the average age being twenty-eight years. Almost every prominent physician of Louisville has his name affixed to some of these death certificates. We surgeons claim we have the right to believe that the vast majority of these cases of acute peritonitis—so-called idiopathic peritonitis—in the young male and a great proportion in females, are due to appendicitis, and I think this is a great argument in favor of surgical procedure in these cases. The physician does not know, or cannot be absolutely certain, that he has a case of appendicitis until he sees the specimen and the surgeon does not know positively.

Certainly the specimens before us are diseased appendices and they would have caused death in every case had not operation been performed.

DR. A. M. CARTLEDGE: In making the investigation spoken of by Dr. Vance, we excluded all cases of tubercular peritonitis; all cases of peritonitis in the female and all cases where the peritonitis was said to have been the result of injury, and found

as has already been stated 168 cases of acute peritonitis occurring in the male in the city of Louisville within the last twenty-three years, and the death certificate was so endorsed. From past experience it is our belief that a large majority of these cases were appendicitis.

DR. T. L. MCDERMOTT: Referring to the quotation Dr. Vance has read from a previous meeting of this society—perhaps it might be well to add a few words in explanation. I had attended the patient, Mr. T., in two previous attacks in which exactly the same symptoms had developed, if anything he was more seriously ill than in this instance, and he had recovered under the ordinary anodyne treatment, opium, salines, etc. I will state also that Dr. Simpson had been called in the last instance previous to my seeing the patient, and had given a hypodermic of morphine, which masked the symptoms to some extent, but at that time I had supposed the trouble was an ordinary attack of colic. I visited him again the next morning and as the temperature was elevated, and he was so profoundly impressed, it then indicated to me that the trouble was more serious in character. Dr. Vance was then called in consultation and the operation was performed shortly afterward. I feel that this patient had the benefit of an operation as early as any physician could have reasonably made a satisfactory diagnosis. While the shock was beyond what we would expect in ordinary colic, still I have seen patients much more profoundly impressed in renal colic and with similar symptoms who recovered without operation. The whole difficulty in these cases lies in the fact, as I stated in a paper read at the last meeting of this society, of our being unable to make a satisfactory diagnosis. I have no doubt if the diagnosis were made at once, if perforation had occurred with healthy structures surrounding it, if the surgeon were called to the case immediately and operate, it would be the proper and only thing to do; but who is able to make such a diagnosis? In the case under discussion I believe the patient would have died in any event; and I further believe that if Dr. Vance had seen the patient earlier a satisfactory diagnosis could not have been arrived at sooner. While I was inclined to the opinion that it was a case of appendicitis, still there was an element of uncertainty about it, and I felt justified in waiting. Again I had seen this patient get well in several previous attacks in which his suffering was seemingly equally intense, and had also seen numerous other cases having about the same line of symptoms which recovered without operation under the ordinary treatment. How can we discriminate in these cases?

I think the matter is still subjudice, and in writing my paper read before the last meeting of this Society, I did so purely in the spirit of research hoping that it might result in our getting at the bottom of the whole matter and formulating something definite in the way of indications for operation, etc. The only solution of the problem in my estimation is to enter into just such discussion as we have been doing, to tabulate each case in which operation has and has not been done, and the result will be a better understanding of the situation. Possibly in that way we may be able to illuminate the field that is now certainly in darkness in the medical mind.

The Medical Raven.

Once upon a midnight dreary,
The doctor slumbered weak and weary
And all the town could
Hear him snore.
While he lay there sweetly napping.
Suddenly there came a tapping
Like a ramgoat madly rapping
His hard head
Upon the door.
"Get thee up," a voice said loudly,
"Come in haste," it added proudly,
Like a man who owned a million
Or much more.
But the doctor never heeded:
Back to dreamland fast he speeded,
For such men as that he needed
In his practice
Nevermore.
For long months that man had owed him,
Not a cent he'd ever paid him,
And the doctor now will dose him
Nevermore.

—*Atlanta Medical and Surgical Jour.*

Asthma.

The following will be found most useful in this distressing complaint:

℞
Chloralis..... ...
Potassii iodidi, of each..... ... 3ss
Syrup of oranges..... f3vj
Water..... ..... f3vj

2 to 5 tablespoonfuls a day.

THE LIBRARY TABLE.

BOOK REVIEWS.

Clinical Diagnosis. By Albert Abrams, M. D., (Heidelberg), Professor of Pathology, Cooper Medical College, San Francisco, Cal.; Pathologist to the City and County Hospital, San Francisco; Author of "A Synopsis of Morbid Renal Secretions," etc.; President of the San Francisco Medico-Chirurgical Society, (1893–1894); President of the Alumni Association of Cooper Medical College (1888–1889). Third edition, revised and enlarged. illustrated. New York. C. B. Treat, 5 Cooper Union, 1894. Price, $2.75.

The fact of a third edition of this manual being issued shows its popularity. It has been revised and enlarged and now comprises 273 pages (including a 19-page index) with 28 illustrations. The physical signs associated with disease of the organs in the various cavities of the body are given in minute detail and include many recent additions to the methods of examining these organs. In palpation of the kidney, the author recommends the recumbent posture. In malpositions of this organ it is no doubt better to remain in the erect posture with the abdominal wall relaxed by bearing the weight of the body on arms.

There is a brief account of bacteria with methods of staining.

An appendix contains a chapter on insanity, and many synoptic tables. The work, brief though it be, covers the field pretty thoroughly and the general practitioner will find it very useful in refreshing his memory on many old points, and adding perhaps not a few new ones to his means of diagnosis.

W. E. P.

A Manual of Therapeutics. By A. A. Stevens, A. M., M. D., Lecturer on Terminology and Instructor in Physical Diagnosis in the University of Pennsylvania; Demonstrator of Pathology in the Woman's Medical College, Philadelphia; Physician to St. Mary's Hospital and to the South Eastern Dispensary; Pathologist to St. Agnes Hospital. Philadelphia, W. B. Saunders, 925 Walnut Street, 1894. Price, $2.25.

"This Manual has been prepared," says the author, "especially for students with the hope that it may serve as an outline of modern therapeutics, to be filled in and extended by systematic study of the larger works."

The drugs havebeen arranged in alphabetical order according to Latin names.

A chapter on "Incomptability in Prescriptions" has been added by Joseph W. England, Ph. G. The book consisting of 435 pages, includes chapters on "Physiological Action of Drugs," "Drugs," "Remedial Measures Other than Drugs," "Applied Therapeutics," "Incompatibility in Prescriptions," "Table of Doses," and is well indexed both as to drugs and diseases.

The large supply of manuals is some index of the demand for them. This one will be useful not only to the student, but the busy practitioner may often refer to it with profit.

W. E. P.

Differential Diagnosis of Common Diseases of the Eyes. Designed for the use of general physicians by W. F. Conners, M. D., Oil City, Pa. Price, 50 cents.

The author notes that this chart is only intended for general indications, to give the family physician a comparative table of the common diseases of the eye. The intention is to help the family doctor to make a diagnosis without instruments of special knowledge.

W. E. P.

Sexual Neurasthenia (Nervous Exhaustion). Its Hygiene, Causes, Symptoms and Treatment, with a chapter on Diet for the Nervous. Third Edition, with Formulas by Geo. M. Beard, A. M., M. D., etc. Posthumous Manuscript, edited by A. D. Rockwell, A. M., M. D., etc. Published by E. B. Treat, 5 Cooper Union, New York, 1893. (Price, 2.75).

The late learned Beard says as to neurasthenia:

"There are two points in the male and female that suffer especially when laboring under nervous exhaustion or neurasthenia, *i. e*, fifteen lines under the prostate gland in the males and thirty lines across the ovary in the female."

These are the prologue of the coming nations; these represent the history of past nations—no medical philosopher except Bilroth ever announced such living gems. Hunter is gone, Beard is gone, and Bilroth is gone. They are gone to the land where an Emperor governs the empire of litters. Nothing shows the man so much as the stamp of individual ideas in every page of his book. It is equal to a liberal education to be allowed to lecture continuously, as did he, in such a school as the University of New York. This book, the third edition, contains 282 pages of strong medical knowledge. The researches began prior to 1868.

Until lately general neurasthenia has been confounded with hysteria, simple hypochondria, some form of insanity, and with the various diseases of the nervous system.

The definition of neurasthenia is not so simple as some would suppose, nor is its causation simple but complex, as is its treatment more medical than surgical, and at times both together, not to direct our attention to one single fault as to emissions solely, to insomnia alone, or to the urinary deposits, but to dig at the root of the diseased tree rather than to lop off each and every effected branch.

Most of the recent works on neurasthenia have been in the German language and they all give especial attention to the digestive and not to the sexual form of the disease. Of the twenty-nine writers in the list only two are in English.

W. F. Mittendoff was of great service in making the urinary analysis. The inferences therefrom are that:

1st. A close attention to the study of the urine showed that spermato is a frequent attendant on all kinds of neurasthenia in the male and indeed in many other debilitating diseases.

2d. That oxalates, phosphates and urates occur in most of these conditions.

3d. That the urine in very nervous persons varies every hour in the day, responding much to the general systemic condition, and especially to the defects of digestion.

4th. That the custom of naming diseases from the character of the urine is fallacious and deceiving.

The author's original essay on neurasthenia was three times declined by medical journals for publication, yet finally become the corner stone of the temple for the treatment of that condition. It was finally published in the *Boston Medical Journal* in April 29th, 1879. The Germans accepted it at once. The original of the work on "American Nervousness" was in effect the chapter on the "Causes of American Neurasthenia," and it was not thought by the publishers to be of any special bearing and scarcely worthy of appearing in print—and indeed it was thought that few would read it, but its repeated endorsement by Mr. Herbert Spencer, in 1882, aroused some interest on the subject.

J. J. C.

Maladies Infectieuses Parasitaires des os, Par Michel Gangolphe, Professeur agrege a la faculte de medecine, chirurgien en chef designe de l'hotel-dieu de Lyon. 714 pp. G. Masson, publisher, Paris, 1894.

This work on the infectious and parasitic diseases of bones may be said, to use a thread bare phrase, to fill an actual want or gap in the medical literature for, although in recent years a large number of articles and monographs have been scattered through the literature on the various forms of infectious and parasitic affections of the bones, there has not appeared a full and comprehensive work on these affections. The lesions and characteristic symptoms are continually being studied with the result that they are approaching clearer and better understood types. Under the name infectious and parasitic diseases of the bones he presents those affections of the skeleton generally thought to be dependent upon the action of pathogenic agents, more or less highly organized; microbes or parasites. Tuberculosis, the different varieties of infectious osteo-myelitis, lepra, hydatid cysts, and actinomycosis are undisputed types. The syphilitic affections, though the exact nature of the pathogenic agent is not yet understood, he has not hesitated to include as well in this classification. The osseous and articular deformations observed during the course of chronic suppurative pleuro-pneumonic processes also are described. The first chapter of the work is wholly devoted to a recapitulation of the generally prevading ideas on the anatomy, physiology and pathology which are indispensible to an exact knowledge of these pathological processes. The following sections treat successively of tuberculosis, of the different varieties of infectious osteo-myelitis, the osseous and articular deformities noticed in connection with chronic suppurative states of the lungs and pleura, lepra, the syphilitic alterations in the skeletal system, hydatid cysts and actinomycosis. The bibliographic indications of French and foreign works are quite complete. The influence of Ollier, his teacher, is more or less observed throughout the work, especially in the treatment of the different conditions. Indeed, it was in his service that the foundations of the work were laid. The writer deserves thanks for collecting the scattered literature on this subject, and presenting it, with his own observations and deductions, in such a clear and concise form.

F. H. P.

Early Diagnosis of Gastric Carcinoma.

In the *Deut. med. Woch.*, Cohnheim of Boas's Poliklinik contends that it is possible to make a fairly certain diagnosis in the absence of a tumour. The old idea that chronic gastritis is accompanied by lactic and fatty acid formation is disputed, but in cases of carcinoma an intense reaction to Uffelmann's test for lactic acid appears. For such an intense reaction stagnation of the gastric contents and a lasting absence of free hydrochloric acid are necessary. If only one of these conditions is present, as in chronic gastritis or dilatation of the stomach, such a reaction does not appear. The author relates a case in which a simple ulcer was suspected, and in which treatment had no lasting effect. When the stomach contents were at length examined no free hydrochloric acid was present, and Uffelmann's test gave a marked result. The stagnation of the gastric contents here was against chronic gastritis, where the food passes into the intestine within the usual time. Later, besides other symptoms, there was marked wasting, and yet no tumour could be felt. At the necropsy a limited growth was found at the pylorus. The author points out that in this case, in the absence of recognizable tumour, a correct diagnosis was made six months before death, chiefly from the constant and marked presence of lactic acid. Within eleven months ten such cases were seen without recognizable tumour, all of which gave a positive reaction with Uffelman's test, and yet no such reaction was ever observed in cases of gastrectasis or of chronic gastritis with absence of free hydrochloric acid. The author lays stress on the importance of early diagnosis in regard to the question of possible removal. Lastly he refers to the new test proposed by Boas for lactic acid in the stomach contents (Epitome, November 4th, 1894, par. 364.)

Ozæna.

Dr. Stein obtains in ozæna most remarkable results from painting the nasal fossæ with a solution of trichloracetic acid. The painting is done by means of a piece of cotton-wool steeped in a solution (one-tenth per cent.) and fixed on the point of a flexible wire. The operation is done three times daily for the first few days and then once a day. The strength of the solution is gradually increased.

CURRENT LITERATURE REVIEWED.

IN CHARGE OF ELLISTON J. MORRIS, M. D., AND SAMUEL M. WILSON, M. D.

IN THE TEXAS SANITARIAN

for June, Dr. J. H. Sears, in his annual address as President of the Texas State Medical Association, spoke of the *History of Medicine in Texas*, giving a very vivid description of the life of a physician in Texas half a century ago, and the changes which have taken place.

He then spoke of the increasing number of dishonest and untrustworthy men practicing medicine and surgery in the state, and appealed to his hearers to assist in the passage of a law restricting and discouraging this.

Hon. Clark Bell has an article on

Railway Spine

which he read before the National Association of Railway Surgeons.

The term, he says, when used, as its inventor intended, to mean a vague pathological condition of the spinal cord, usually not accompanied by external injury to the spine, but due to some incident of railway travel is inexcusable.

Quoting the definition of Erichsen he states that it has no definite meaning, may cover any subjective symptom at all, and stigmatizes it as an invention intended to help malingerers to bleed corporations, and used for no other purpose.

Other papers in this issue are on "Prevention of Consumption," by Dr. R. M. Swearingen, and "Dress as a Factor in Diseases of Women," by Dr. E. C. Collins.

IN THE BRITISH JOURNAL OF DERMOTOLOGY

for June is an article by Dr. Wallace Beatty on

Seborrhœa.

The article begins by quoting Unna's statement that the term seborrhœa is commonly applied to two totally different diseases; that "seborrhœa oleosa" is a hypersecretion of the sweat glands, and that there is no dry seborrhœa, or deposit on the skin, of firm products of sebaceous glands.

These dry seborrhœas he says are chronic inflammations of the skin.

His clinical description states that seborrhœic eczema usually starts at the scalp and there is a history of dandruff. It has predilections for such places as the junction of forehead and hairy scalp, the temples, ears, naso genial folds, around the mouth, intermammary region; interscapular region; axillæ; crurogenital regions; and the back of the hand, particularly between the metacarpals of the thumb and index finger. It is prone to show a yellow coloration, (due to increased fatty secretion,) tends to spread in a serpiginous manner, and is of three grades of severity, squamous, crusted, and moist or weeping.

The creeping mode of spreading, the effect of parasiticides, and the finding of microorganisms lead to a belief in a parasitic origin.

The diagnosis depends on the mode of spread, from the head downward, on the finding of scaly spots—outposts of the disease, and the choice of certain localities, the yellow color and serpiginous character.

Unna mentions the frequent appearance of seborrhœic eczema in cases of syphilis, causing an itching, serpiginuous eruption and calling for local as well as general treatment.

The author takes issue with Unna in regard to the secretion of fat by the sweatglands—he thinks this does not take place but that the fat comes from around the hair follicles, and bears no relation in quantity to the number of sweat glands. The vernix caseesa, also, he thinks due to the sebaceous and not to the sweat glands.

The paper is accompanied by some plates showing the microscopic conditions seen.

The observations confirm the view that seborrhœa is a disease of the sebaceous glands and also that of Unna—that dry seborrhœa is an inflammation of the skin.

Dr. Alexander Morton writes of "Eruption following the Use of Oil of Sandalwood."

He describes a case, a man twenty-five years old under treatment for a fresh attack of gonorrhœa by injection of solution of chloride of zinc and, interially, twenty drop doses of sandal oil in capsules, three or four times daily. The gonorrhœa improved rapidly, but in the third week of treatment there was a sudden eruption on the trunk and lower limbs.

The eruption was of dark red spots, many purpuric, about the size of a split pea. Many coalesced.

These spots were quite smooth and scarcely elevated. The eruption was fairly symmetrical, more abundantly on the back than front and on the extensor than the flexor surface of the legs. No subjective sensation, no complaint arthritic pains, no constitutional disturbance.

The drug was stopped, and in a few days the eruption disappeared without desquamation and leaving a very slight evanescent pigmentation.

There are many reasons for believing that sandal oil is not adulterated with copailia and the author gives a series of these, and also, though this eruption resembled in appearance some of those due to copailia, it was unaccompanied by itching and did not appear until the second week of treatment, while a copailia rash is to be looked for in about eight days.

Erichsen stands almost alone among English authorities who believed in gonorrhœal eruptions and those described by him might readily be syphilitic, as diagnostic appearances are not given and this may be said of the descriptions of most foreign writers.

The great necessity for recognizing a drug eruption is emphasized by one or two cases mentioned.

Dr. W. Dale James describes a case of "Glycosuria from Taking Thyroid Extract." The symptoms disappeared on stopping the use of the drug and adopting a diabetic diet.

Dr. S. G. Stafford Taylor describes "Two Fatal Cases of Pemphigus."

PERISCOPE.

IN CHARGE OF WM. E. PARKE, A.M., M. D.

MEDICINE.

Hydrastinine in Uterine Hemorrhage.

Gottschalk, (*Brooklyn Med. Jour.*), says hydrastinine may be employed:

1. First of all, in those uterine hemorrhages which are traceable to a pronounced congestion of the uterus. To these belong, above all, the often very profuse menorrhagias of spinsters, in whom there is no pathological change in the condition of the genitals. In some of these cases it is possible to obtain a permanent result, so that even after discontinuing the remedy the menstrual flow remains smaller.

2. Also in hemorrhages which have their pathological and anatomical cause in endometritis, hydrastinine will lessen the quantity of blood, but here, according to Gottschalk's experience, the action is only palliative, not being sufficient alone to cure the local cause of the trouble.

3. For prophylactic or intermenstrual use, hydrastinine is useful before or during the first returning profuse menstruation after an abrasion of the uterine mucosa. It is well known that this menstruation, occurring after six weeks is often very profuse. In the very cases where there was a great loss of blood before the operation, it is of great importance to prevent further profuse hemorrhage. This is possible if the treatment with hydrastinine is begun several days before the expected menstruation, and, if necessary, continued during the duration of the menstruation.

4. Menorrhagias caused by retroflexio uteri are best treated by correction of the malposition; but for cases of fixed retroflexion, where the reposition is not yet possible, hydrastinine is a commendable remedy.

5. Secondly, uterine hemorrhages, *i. e.* those caused by the changes of the adnexa and their surroundings—offer a large field for the successful use of hydrastinine. To these belong the menorrhagia and metrorrhagia with pyosalpinx, oophoritis, ovarian tumors and exudations. Of course the cause of the trouble is not influenced by the remedy.

6. Climacteric menorrhagias are much diminished by a faithfully carried out hydrastinine treatment.—*Canada Lancet.*

Treatment of Alcoholism by Strychnine Nitrate.

Breed concludes a paper in the *Medical News* of April 7, 1894, on this subject as follows:

1. That we have in this drug a remedy that actually, for a period as yet undetermined, removes the desire for alcoholic stimulation in the chronic inebriate, and that *without the least effort on his part.*

2. A remedy that removes the distress and gnawing at the epigastrium, so common upon the withdrawal of alcohol.

3. A remedy that tones up the nervous system, allays the insomnia, the flighty and other bad feelings in the head, the mental disturbances, and the tremulous agitation and uncertainty of voluntary motions due to the withdrawal of stimulants.

4. A remedy that brings back the appetite and general physical vigor in the body.

5. A remedy that temporarily transforms a wholly demoralized creature into a man.

6. A remedy that is of great value in acute attacks of alcoholism.

7. Incidently, a remedy that is an exceedingly good and safe heart-tonic.

8. More than all, a remedy that exerts a moral influence upon the patient, giving him what he had before wholly lost,—to wit, hope, enthusiasm, self-confidence, and courage, where before was dependency, abandonment, and despair; a steady, straightforward gaze, and a bright, youthful expression of the eye, which replaces the shamefaced, snakeing, apologetic air of total depravity of the chronic inebriate.

9. We have in the nitrate of strychnine not a remedy that will oblige a man to abstain from drink if he does not want to do so, and such subjects do not deserve one. From the results obtained by the gold cure, the silver-ash cure, the Keeley cure, etc., we may conclude that we have a remedy that is as efficient as any of these and much safer; a remedy, moreover, that is not secret, and can be used by men who know the action of drugs and can use them with discretion and safety to the patient.

Meat-Eating and Bad Temper.

Mrs. Ernest Hart, who accompanied her husband in his recent trip around the world, appears to come to the conclusion that meat-eating is bad for the temper. In the *Hospital* she says that in no country is home rendered so unhappy and life made so miserable by the ill-temper of those who are obliged to live together as in England. If we compare domestic life and manners in England with those of other countries where meat does not form such an integral article of diet, a notable improvement will be remarked. In less meat-eating France, urbanity is the rule of the home; in fish and rice-eating Japan, harsh words are unknown, and an equisite politeness to one another prevails even among the children who play together in the streets. In Japan I never heard rude, angry words spoken by any but Englishmen. I am strongly of opinion that the ill-temper of the English is caused in a great measure by a too abundant meat dietary combined with a sedentary life. The half-oxidized products of albumen circulating in the blood produce both mental and moral disturbances. The healthful thing to do is to lead an active and unselfish life, on a moderate diet, sufficient to maintain strength and not increase weight. —*Boston Medical and Surgical Journal.*

SURGERY.

Appendicitis.

Dr. J. Wm. White in *Theapeutic Gazette.*

SUMMARY:

1. The explanation of the great frequency of inflammation of the appendix is to be found in the following facts:

(*a*) It is a functionless structure of low vitality, removed from the direct fæcal current; it has a scanty mesentery so attached to both cæcum and ileum that it is easily stretched or twisted when they become distended; it derives its blood-supply through a single vessel, the calibre of which is seriously interferred with or altogether occluded by anything which produces dragging upon the mesentery.

(*b*) In addition, there is almost always present a micro-organism—the *bacterium coli commune*—capable of great virulence when there is constriction of the appendix or lesions of its mucous coat or of its parietes.

2. The symptoms in a case of mild catarrhal appendicitis—general abdominal pain, umbilical pain, localized pain and tenderness on pressure in the right iliac fossa, vomiting, moderate fever, and slightly-increased pulse-rate—cannot at present with any certainty be distinguished from the symptoms, apparently precisely identical, which mark the onset of a case destined to be of the very gravest type.

3. It must be determined by future experience whether or not operation in every case of appendicitis, as soon as the diagnosis is made, would be attended by a lower mortality than would waiting for more definite symptoms indicating unmistakably the need need of operative interference. At present such indication exists in every case if the onset is sudden and the symptoms markedly severe, and whenever in a mild case the symptoms are unrelieved at the end of forty-eight hours, or, *a fortiori*, if at that time they are growing worse.

4. It must be determined by future experience whether cases seen from the third to the sixth day, which present indications of the beginning circumscription of the disease by adhesions and which tend to the formation of localized abscesses, will do better with immediate operation with the risk of infecting the general peritoneal cavity, or with later operation when the circumscribing wall is stronger and less likely to be broken through. At present, operation is certainly indicated whenever a firm, slowly-forming, well-defined mass in the right iliac fossa is to be felt; or, on the other hand, when a sudden increase in the sharpness and the diffusion of the pain and tenderness points to perforation of the appendix or breaking down of the limiting adhesions.

5. In the beginning of general suppurative peritonitis, operation offers some hope of success. In the presence of general peritonitis with septic paresis of the intestines, operation has thus far been useless.

6. Recurrent appendicitis of mild type, like acute appendicitis, frequently results from digestive derangements. Several attacks may occur followed by entire and permanent recovery, but it is as yet impossible to differentiate these cases accurately from those which do not tend to spontaneous cure. Operation is certainly indicated whenever the attacks are very frequent.

7. Chronic relapsing appendicitis is characterized by the persistence of local symptoms during the intervals and by more or less failure of the general health. It usually indicates operation.

8. In either the recurrent or the chronic relapsing variety operation should be advised according to the following indications formulated by Treves: whenever (1) the attacks have been very numerous. (2) The attacks are increasing in frequency and severity. (3) The last attack has been so severe as to place the patient's life in considerable danger. (4) The constant relapses have reduced the patient to the condition of a chronic invalid, and have rendered him unfit to follow any occupation. (5) Owing to the persistence of certain local symptoms during the quiescent period, there is a probability that a collection of pus exists in or about the appendix.

HYGIENE.

The Question of Disinfection of Apartments.

Chamberland and Fernbach (*Revue Scientifique*) say: The disinfection of apartments that have been occupied by patients suffering from contagious diseases is of great importance. Experiments are being constantly made with the object of discovering a reliable disinfectant, free of destructive or noxious properties. While linen, clothing and bedding can be easily disinfected with steam, with or without pressure, the walls, ceiling and floor, are the great difficulty. Corrosive sublimate, besides being a dangerous poison, is not efficacious when the surfaces are not smooth. The essences, as shown by Ch. Chamberland are valuable antiseptics, but it requires several days before some pathogenic germs are destroyed. Peroxide of hydrogen acts better than ozone, and destroys the germs rapidly if applied with a spray, but it is expensive. From numerous experiments made on the bacillus subtilis, the aspergillus niger, the torula cerevesiæ, the typhoid bacillus, and others, Chamberland, one of the distinguished directors of the Pasteur Institute in Paris, and his collaborator, concludes that chloride of lime in the proportion of ten per cent., at a temperature of 40° to 50° C., is the best and cheapest disinfectant.—*N. Y. Therap. Rev.*

BACTERIOLOGY.

Antiseptic Properties of the Oil of Cinnamon.

Kyle (*Therap. Gaz.*) finds that in a strength of $\frac{1}{500}$ it prevents the growth of the germs suppuration and erysipelas after an exposure of not less than thirty minutes, those of tubercle, anthrax, tetanus and glanders require an exposure of at least two hours; typhoid fever between one and two hours, and Asiatic cholera from three to five hours. The effect produced upon the germs he believes to be

rather a suspension of activity than complete destruction, so that this cannot be regarded as a safe antiseptic for surgical work, though valuable for application to mucous membranes.

Germs in Agriculture.

M. Jean Danysz recently reported to the French Academy an ingenious method of ridding the country of small rodents which had become so numerous and destructive that it was impossible to produce any crop. Every acre of land furnished a home for thousands of these pests. The method adopted was to dissolve some gelatin cultures of pathogenic bacteria capable of producing an infectious disease in mice, then soaking a great number of small cubes of bread in this solution, and placing the bread near the holes occupied by the rodents, every day for three days in succession. Within two weeks after this method was adopted, scarcely a live mouse was to be found in the district treated. When the burrows of the rodents were opened, their galleries were found to be filled with dead mice.—*Molium Medicine.*

Bacilli Tuberculosis in Cigars.

Dr. Kerez (*Centralblatt fur Bacteriologie*), reports the result of experiments which he has been making for the purpose of determining the possibility of the communication of tuberculosis through the medium of cigars. It is a well known fact that cigar makers are in the habit of making the leaves adhere to the cigar by moistening them with saliva from their own mouths. The force of habit leads them to continue this practice, although in recent times manufactures provide their workmen with materials for the purpose indicated. Dr. Kerez made cigars by moistening the leaves with saliva known to contain tubercle bacilli. The cigars were then dried and packed away in boxes in the usual manner. It was found afterward, when the cigars were unrolled and the leaves washed in water, that the infusion thus obtained, having been injected in guinea pigs, produced consumption, clearly showing that cigars may thus be the means of communicating tubercle bacilli and giving rise to pulmonary disease.—*Journal of the Med. Sci.*

OBSTETRICS.

The Placenta in Uterine and Tubal Abortion.

Pilliet (*Progres Medical*), has studied two distinct cases of tubal abortion and compared them with many other reported instances of this condition. The chief characteristic of tubal abortion is its incompleteness. After the destruction or expulsion of the fœtus portions of placenta remain attached to the tube and continue to develop. The same occurs in many cases of early uterine abortion, hence placental polypi or tumors—"placentoma" or "deciduoma"—develop. Dropsical hydatidiform chorionic villi, representing an abortion several years past, have been removed from the uterus with the curette. But the parasitic remains of the placenta are far more commonly seen, if not constant, after tubal abortion. In tubal gestation ending in abortion small hemorrhages set in, then a free show, corresponding to the expulsion of part of the ovum. Slight oozing follows, then the tube fills gradually, and at last another considerable loss of blood occurs. The presence of a piece of placental tissue explains this phenomenon. When, therefore, after a loss of blood resembling in clinical history an abortion, a tube remains enlarged and tender, and, when uterine hemorrhages continue, without complete return of the tube to its normal proportions, tubal gestation, and incomplete abortion may be diagnosed. Hence an operation is indicated to anticipate the risks of intraperitoneal rupture. The persistence of portions of placenta after abortion appears easy to explain. At term the blood sinuses of the uterine tissue have widened and coalesced so as to form a single layer of blood between the maternal and the fœtal structures. Hence complete detachment of the placenta is easily effected. In abortion the above-named condition has not developed, detachment becoming more difficult. In tubal abortion the placenta becomes closely united to the tubal wall, which cannot undergo the complicated changes that occur in the uterine tissue in normal pregnancy.

ARMY AND NAVY.

CHANGES IN THE U. S. ARMY FROM JULY 7, 1894, to JULY 14, 1894.

Captain George McCreery, Assistant Surgeon, will be relieved from duty at Fort D. A. Russell, Wyoming, by the Commanding Officer at that post and will report for duty at Fort Washakie, Wyoming.

First Lieutenant Frank T. Meriwether, Assistant Surgeon, will be relieved from duty at Fort Logan, Colorado, by the Commanding Officer of that post and will report for duty at San Diego Barracks, California.

Major Augustus A. De Loffre, Surgeon U. S. Army, Fort Logan, Colorado, is granted three (3) months leave of absence, with permission to go beyond sea.

Captain James D. Glennan, Assistant Surgeon, now on leave of absence, will report without delay to the Commanding General, Department of the Missouri for temporary duty.

Major Egon A. Kœrper, Surgeon, granted leave of absence for one month on Surgeons Certificate of Disability.

The leave of absence for seven days, granted Captain Paul Clendenin, Assistant Surgeon, is extended twenty-three days.

NEWS AND MISCELLANY.

The St. Louis *Clinique* has passed into the hands of Dr. Emory Lanphear, Professor of Surgery in the College of Physicians and Surgeons. Dr. Lanphear will conduct the journal in the interests of that school, and of the medical profession of the West.

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ORIGINAL ARTICLES.

INTERSTITIAL KERATITIS; ITS DIAGNOSIS AND TREATMENT.

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The discussion of interstitial keratitis opens up a wide field interesting alike to the ophthalmic surgeon and the general practitioner, for apart from a consideration of the clinical features presented by it, a diagnostic significance has been attributed to the disease, namely, that its occurrence infallibly stamps the syphilitic inheritance of the patient.

A typical case of interstitial keratitis begins commonly with slight ciliary congestion and watering of one eye. In a few days a faint cloudiness is seen, beginning at the margin, sometimes at the centre of the cornea and extending over it. This haziness is situated in the true substance of the cornea, the epithelium is intact. In some instances the haze is seen to be made up of small circumscribed dots, occasionally cases are seen presenting one or two small dots as the only lesion. Gradually the opacity becomes more dense, and at an early date vision is usually greatly reduced. In from two to four weeks the cornea has generally passed into a condition of white haziness, looking like ground glass. Photophobia and pain are often moderate. Sometimes, however, they are severe. When the inflammation is at its height there is usually a zone of pericorneal hyperæmia, and even when the zone appears to be absent it may be readily produced by touching the eye or exposing it to light. Blood vessels often make their appearance in the deep and superficial parts of the cornea. They may require focal illumination for their detection, or the whole substance of the cornea may be red on account of the vast network of new vessels. Redness of the cornea is however uncommon. When situated in the deep parts of the cornea the scarlet hue of the vessels is toned down bythe hazy superficial layers through which they are seen, giving a dull reddish pink color (salmon patch of Hutchinson). An abundance of vessels in the cornea means a protracted case. There is little or no tendency to ulceration of the cornea, or to the formation of pus. Sometimes the disease is attended with iritis and inflammation of the deeper structures of the eye, evidence of which can seldom be noted through the hazy cornea. Rarely can the pupil be illuminated even in mild cases.

Both eyes are usually affected in interstitial keratitis. In Hutchinson's series of 102 cases, 91 were symmetrical. Usually an interval of a few weeks separates the onset in the two eyes. Rarely the interval is a year or more. The disease usually occurs between the ages of 8 and 15 years. Cases occurring as early as 18 months and as late as the 60th year have been reported. None of Mr. Hutchinson's cases were over twenty-six years. Early cases are usually mild. The disease may run its course for months or years and may terminate in recovery or a most

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damaging opacity of the cornea. Rarely does the patient recover perfect vision, owing to the irregular astigmatism produced. Iritis occurring makes the prognosis more unfavorable. A favorable result is much influenced by the character of the case, which may be very mild throughout its whole course. Treatment does not greatly influence the outcome. When only one eye is affected treatment will not prevent the onset of the disease in the other eye.

Of great interest is the question of the relation of the disease to hereditary syphilis, and on this subject there is a wide difference of opinions. Mr. Hutchinson and Panas may be quoted as the most distinguished supporters of the two extreme views held upon this subject. In 1863, in a memoir on "Syphilitic Diseases of the Eye and Ear" (page 204), Mr. Hutchinson first enunciated the statement that interstitial keratitis is always a symptom of hereditary syphilis. That his views upon this question have undergone no changes is shown by his recent contributions, "Interstitial keratitis in its typical form is always a consequence of syphilis, and it is itself sufficient for the diagnosis," (Syphilis, London, 1887, page 75). Mr. Hutchinson also contends that interstitial keratisis is not a symptom of a cacheria produced by syphilis, but is caused by the virus acting directly on the tissue of the cornea. "The transmission of the disease in inheritance as well as in acquisition is always effected by the conveyance from person to person not of a tendency to disease but of a particular virus" (Syphilis, London, 1887, p. 71). "It is not the the state of health which syphilis may produce in the parent which he transmits to his offspring, but the poison itself" (Ibid, page 385).

Facilis princeps of English speaking syphilographers Mr. Hutchinson's opinions have always carried great weight, and so it has come to pass that the majority of English writers have concurred in his view, Nettleship, (Diseases of the eye, p. 142); Brudenell Carter, DeWecker, (Ocular Therapeutics, p. 124); Noyes, (Text Book Diseases of the Eye, 1890, p. 329); Fuchs, (Textbook, Ophthalmology); Macnamara, and many others have ranged themselves on this side. Among the most ardent supporters of Hutchinson's theory must be mentioned Dr. J. William White, of this city. Dr. White, in his comprehensive article on "Hereditary Syphilis" in Pepper's System of Medicine, p. 202, after carefully examining the clinical evidence upon this question maintains, "Interstitial Keratitis is a symptom of inherited syphilis, and the unmistakable presence of the former disease is sufficient proof of the existence of the latter."

On the other hand, it would appear that a majority of the authorities who have written upon this subject, while recognizing the important part which inherited syphilis plays in the production of interstitial keratitis, as first pointed out by Hutchinson, do not agree with him that in its typical form it is almost a consequence of syphilis, and is sufficient for the diagnosis; and who hold that while the disease is a symptom of a cachexia frequently produced by syphilis, it is often caused by other systemic diseases affecting nutrition, such as scrofula and rheumatism, each of which by its debilitating influence may give rise to a diathesis which favors the development of the disease. Panas, one of the most distinguished advocates of this view, says (Archives de l'Opthal, Vol. I., page 578) "hereditary syphilis is only one of the numerous causes of the exhaustion of constitution which leads to rickets and later on to interstitial keratitis," "Interstitial keratitis is a manifestation, '*de la misere organique*,' whatever its cause may be. Inherited syphilis may be one of its causes but it is neither the only one or even the most common" (page 580). This view has the weighty sanction of Schweiger (Handbook Ophthalmology, page 298). "Interstitial keratitis undoubtedly occurs in individuals absolutely free from syphilis. Mr. Hutchinson's view that this disease is to be regarded as a distinct consequence of congenital syphilis has not been generally adopted in Germany." Many other opthalmic surgeons have expressed themselves more or less strongly to the same effect, Saemisch, (Graefe & Saemisch's Handbook, Vol. IV., p. 264); Solberg Wells, (Diseases of the Eye, p. 138); Graefe, Manthuer, (Zeissl's Jahrbuck der Syphilis, 1875, p. 288); Oliver & Norris, (Text-book Ophthal, 1893, p. 333). Edward Jackson, "The most frequent cause is inherited syphilis, but it may depend upon other causes of malnutrition" (Essential Diseases Eye, p. 95).

Dr. Hayes Agnew says, "The disease (interstitial keratitis) is seldom seen independent of inherited constitutional vice. Either strumous or syphililic (Agnew's Surgery, Vol. III., p. 208).

The following table of statistics upon this question, compiled by Dr. Emil Gross, and quoted by Dr. Ogilvie in the *London Lancet* for 1893 (page 1438), is interesting as giving the percentage of cases showing hereditary syphilis:

NAME.	Number of Cases.	Percentage of Inherited Syphilis
Alexander	102	35.3
Aucke	100	61.0
Ayrs	12	8.3
Cohn	...	6.5
Davidson	...	20.0
Despagnet	119	14.2
Dietin	18	55.2
Giraud-Tenlon	30	46.6
Graefe	...	5.0
Haletnhoff	66	42.7
Horner	51	70.5
Iakouelena	63	57.1
Leplat	28	64.2
Michel	...	55.0
Nettleship	...	68.0
Parinand	32	96.7
Pfister	130	64.6
Saemisch	...	63.0
Sedan	34	32.3
Theobold	8	50.0
Trousseau	40	92 5
Wecker	...	66.0

The existence of interstitial keratitis in acquired syphilis is proved beyond doubt, cases having been recorded by many of the best and most competent observers as Alexander, Horner, Hirschberg, Haltenhoff, Michael, Hutchinson and others.

It would appear from an impartial consideration of the clinical evidence, that in the causation of interstitial keratitis, syphilis plays the most important part, but not the only part. Perhaps 60 per cent. are specific. The corneal affection is an important symptom of syphilis, but only to the same extent as are all the other symptoms of this polymorphous disease of which not one is pathognomonic, and tbe diagnosis of which "is to be attained rather by a careful appreciation of all the facts than by placing confidence in any one symptom," (Hutchinson, Syphilis, 1887.)

The treatment of interstitial keratitis is quickly summed up. Good hygiene, proper food and protection of the sensitive cornea by wearing smoked glasses. Instil morning and night into the conjunctival sac a few drops of a solution of atropine sulph, gr. ii to the ounce, with frequent bathing of the eye for a few minutes at a time with hot water. Small tonic doses of mercury may be given, but even in well marked syphilitic cases it is often doubtful if it does any good. On the other hand many cases are known in which mercurial treatment seemed to have an injurious effect on the corneal disease. This was first observed by Hutchinson himself. Cod liver oil or syrup of the iodide of iron should be given if indicated. All local applications as silver tannin, etc. always do harm. Brudenell Carter says some of the worst cases he has encountered had been aggravated by irritating local applications. When the acute stage is ended, the yellow oxide of mercury ointment may be employed with benefit to stimulate the absorbents in carrying off the remains of the opacity.

IN the *Berliner klinische Wochenschrift* (cried in the *Centralblatt fur Klinische Medicin*) Dr. P. Furbinger treats of the peanut as an article of food rich in albumin, of which it contains forty-seven per cent., together with nineteen per cent. of fat and non-nitrogenous extractive matters. He recommends the use of roasted peanuts in the form of soup or mush. On account of their cheapness, peanuts are recommended as a popular article of food, especially in poorhouses and the like; moreover, they are recommended as an artrcle of food for the corpulent, for diabetes, and for the subjects of kidney disease, in the last mentioned of which foods rich in animal albumin are to be avoided.

For Chilblains.

Dr. James R. Wood (*Amer. Med. Surg. Bulletin*) employs the following:

℞ Zinci oxidi 3j
Camphoræ pulv. .....
Myrrhæ pulv. .....
Opii pulv ..... āā gr. xxx
Adipis 3j
M.

AN ice poultice, made by thoroughly mixing together finely cracked ice, sawdust and salt, will be found to be an excellent application in supraorbital neuralgia, or in any similar painful affection, if the nerve be superficial. It may also be utilized to deaden the sensibility of the skin previous to opening abscesses, felons, buboes, removing small tumors, etc. It should be remembered that freezing may result from its continued application.--*Ex.*

THE TREATMENT OF TYPHOID FEVER.*

M. A. CLARK, A. M., M. D., Barnesville, Ga.

The first duty of the physician in the treatment of any disease is to pay strict attention to prophylaxis and hygiene. This is, especially applicable to the successful management of typhoid fever.

With proper attention to these, the majority of cases of typhoid fever will recover without any medicinal treatment. Hence, we should be very wary in making any decided claims for medicine. We do know, however, that there are remedies, which will not only mitigate the symptoms but also shorten the disease itself. Such being true, it is the duty of every physician to seek diligently for these remedies and to judiciously and faithfully apply them.

In this paper, I propose to set before you what seem to me to be the best of these remedies.

Before referring to the subject proper, allow me to say that I fully believe that this disease is due to some powerful germ, no doubt the bacillus of Eberth, which produces not only very marked lesions in the parts invaded, but also very decided nervous phenomena and great waste of the whole system. If we, then, can find some remedy that will check this dread germ in its ravages and destroy the poison it produces, we have found that remedy which will prove a most powerful adjuvant in the management of this disease. Our hope lies in the antiseptic treatment. In fact, it seems to me that this plan of treatment is *par excellence* the one from which we may hope to derive any decided results.

Henry claims best results from thymol; Rossbach and Wolff, from naphthalin; Pepper, from nitrate of silver; Thistle, from salol; and calomel is urged by others. All of these are no doubt good and well worthy of trial. Having had such good results from the use of another most powerful antiseptic, I beg to offer it as the one for the treatment of this disease, even though it falls short of the definition of an intestinal antiseptic as given by Bouchard—"It should be more or less insoluble and exert no toxic action on the organism." This remedy exerts no toxic action upon the system, but it is soluble being itself a solution.

I refer to hydrogen peroxide, which all will admit is a most potent antiseptic when locally applied. Seeing such excellent results from its local use, I ventured to test it as an internal antiseptic, believing that it would prove most effective. Having been rewarded with most wonderful results in the few cases in which I have used it, and feeling so sure of its continued effectiveness, I offer it to you for your consideration on this occasion.

If given at onset of the disease, it will not only mitigate the severe symptoms but will also check the disease itself. The tongue will rapidly clear off, tympanites will subside or not appear at all; the diarrhœa will diminish; no marked nervous phenomena will ensue, and the disease will spend its force with but comparatively little wear upon the system.

I give from 20 to 40 minims of some reliable 15 volume solution, preferably Marchand's, well diluted, every 2 or 3 hours till slight nausea is produced, and then every 4 or 6 hours till convalescence is fully established.

With its use from the beginning, I find no necessity for antipyretics, the temperature never rising sufficiently high to authorize their use. If, however, it becomes necessary to resort to some means of reducing the temperature, I prefer phenacetine in 5 gr. doses every 4 to 6 hours. The Brand method may work well in the hospital practice, but it can not be used effectually in ordinary private practice. If the phenacetine is followed by, or given with a mild stimulant and used only to reduce high temperature, there will be no unpleasant effects at all. I can not say so much for the other coal tars or even quinine.

I begin at the onset to attend carefully to the diet of my patients, striving to prevent all the waste possible by giving proper nourishment. Milk is by far the best diet. Given in small quantities and at frequent intervals it is usually well borne. If not well tolerated it may be peptonized and then given without ill effects. Hor-

*Read before Georgia State Medical Association, April, 1894.

lick's malted milk, beef tea and some reliable beef extract are usually easily assimilated and are valuable aids to the milk. Solid food is rigidly withheld.

Water should be given not only in connection with the medicines but also at frequent intervals whether called for by the patient or not. It is cooling and refreshing to the patient, aids in the elimination of poisons from the system by its diuretic effects upon the kidneys, and keeps up the normal amount of body fluids. It should be deemed one of the important factors in the treatment of this disease.

The mineral acids, inasmuch as they are aids to digestion, should be given in small doses, well diluted, three or four times daily. I prefer dilute nitrohydrochloric in 10 minim doses three times a day.

Alcohol should no longer be considered routine treatment, but should be used only when the symptoms absolutely indicate. Properly treated, few cases will require the frequent use of any alcoholic. When used it should be given most cautiously, as too much will cause unfavorable symptoms and is worse than not using at all.

Turpentine stupes or turpentine locally applied, may be used with benefit, whenever there is tympanites. I find it unnecessary when using peroxide of hydrogen.

If the diarrhœa is excessive, as many as six or eight stools in twenty-four hours, it should be controlled by nitrate of silver, bismuth, or some other astringent. I prefer bismuth subnitrate in 15 to 20 gr. doses, or salicylate in 5 to 10 gr. doses every two to four hours. I found no trouble with the diarrhœa, but, if it should become troublesome, I would employ in connection with the bismuth occasional enemeta of weak solutions of hydrogen peroxide, having found them very effective in the summer diarrhœas of children.

If the peroxide of hydrogen is given from the outset of the disease, the so-called typhoid phenomena, low muttering delirium, subsultus tendinum, picking at the bedclothes and so on, will not occur. If, however, I should be so unfortunate as to have to deal with them, I would rely solely upon the sedative dose of calomel, thirty grains. It will quiet such nervous phenomena when nothing else will, and, too, without any unpleasant effects upon the patient.

Other complications must be treated according to the usual methods. I believe, however, they will rarely occur, if this treatment is used from the beginning.

During convalescence, it is very essential that the patient be rigidly dieted. The liquid diet with a little broth, milk toast, soft boiled eggs, should be given till the third week of convalescence, and even then solid food should be used most cautiously.

I herewith submit two cases illustrative of the results of this treatment.

Jamie R., aged 10, family history good, previous health good. Had been sick with typhoid fever ten or twelve weeks and was in the beginning of the second relapse, so-called, when I was called in. Having been poorly nourished he was very anæmic and much emaciated. Saw him first in the afternoon. Temperature 106° F., pulse 140, weak and irregular, marked tympanites, pain and tenderness in right iliac region, very restless, slight delirium at intervals. Gave 3 grains of phenacetine with four teaspoonsful of brandy every four hours to reduce high temperature. Gave peroxide of hydrogen one ounce during the 24 hours. Milk at frequent intervals. In 36 hours temperature was under control, tympanites rapidly disappearing, delirium absent, patient comfortable and begging for bread. Continued the peroxide and nourishment. In one week temperature was normal and convalescence was well begun. Recovery was rapid and complete.

Annie L., aged 9, family history good, previous health good. Had just returned from a visit to place where there was an epidemic of typhoid fever. Had been sick a little more than a week, when I first saw her. Symptoms showed a case of typhoid fever of no mild type.

Began at once with 20 minims of hydrogen peroxide every three hours. Gave 5 minims of dilute nitro-hydrochloric acid three times daily. Milk in small quantities and frequently repeated. Used phenacetine and salol, 1½ grains each, to control restlessness and produce sleep during first two days. Afterwards continued the peroxide and nourishment. In less than three weeks temperature was normal and convalescence was fully established. Recovery was rapid and complete, there having been comparatively little exhaustion of strength and vitality.

ARTIFICIAL FEEDING AND THE CARE OF INFANTS.*

JOHN W. S. McCULLOUGH, M. D., Alliston, Ont.

The subject of the artificial feeding of infants is a most important one, and is becoming more so every day we live, because the number of children requiring it is rapidly increasing.

While it is an unfortunate thing for the child at the best of times to be deprived of Nature's form of food, it is no less a fact that circumstances often necessitate partial or complete feeding by hand,

Our profession has not, I think, given this subject the practical attention it merits. Too much latitude has been allowed the commercial greed of the makers of the various patent foods with which the market is stocked. The matter of infants' food and all the little details pertaining thereto, are usually left to the discretion of the nurse, who may be the most incompetent party in the world to judge in such matters, or else to the mother who, often young and inexperienced, feeds her child on pure cow's milk, or the same diluted with simple water or lime water. Not satisfied with this, for her baby usually does not thrive well upon it, she may add a daily allowance of boiled bread and milk or boiled biscuit. As a result the child has vomits or has diarrhœa. All the mothers of families in the neighborhood, with the most tender solicitude for the baby, assure the young mother that "Vomiting in a baby is a healthy sign." The mother soon is frightened into consulting her doctor. He, often without a great deal of thought to the matter, though he may tell her that such vomiting means too much, or an improper quality of food, may prescribe Nestles' Food, which is as good any of its class. It by no means nor often does well. It may suffice for a small child, but is never sufficient for a large one. If this evidence of simple indigestion were the worst result 'twere well, but the large infant mortality is directly traceable to improper feeding and, worse than all, so frequently is the miserable dyspeptic after-life.

These few reasons should amply suffice to lead us to inquire with the greatest care as to what should be the food of the infant, who must of necessity be fed on some substitute for the mother's milk. We should in such a case be at once able to recommend the best and to give proper instructions regarding its preparation, proper quantity, times of feeding, etc.

The best food is that one which first of all is satisfactory as regards quality. Then to meet with favor it must be simple of preparation, easily and cheaply procurable. A complicated plan may do for some people but with the majority it will suffer from neglect.

The patent foods, as I have already intimated, are not likely to be satisfactory as regards quality. They do not suit the varying ages of the child. They are expensive and not always to be depended upon.

The best food, and that which will continue to be most used, is one having for its basis cow's milk. Asses' and goat's milk approach the mother's more nearly in chemical composition, but they are not usually accessible. We must approximate the cow's milk by proper preparation to as near that of the mother's as possible.

A comparison of the two shows that

Cow's milk		Mother's milk
Acid	Reaction	Alkaline
13.2 per cent.	Solid	12-13 per cent.
4. per cent.	Fats.	3.4 per cent.
4. per cent.	Albuminoids	1-2 per cent.
4-5 per cent.	Sugar	.7 per cent.
.7 per cent.	Extractives	1-2 per cent.

So we see the chief differences between the two are in that cow's milk is acid in reaction, contains a little more fat, considerably more albuminoids and considerable less sugar.

The most important practical difference consists in the manner in which cow's milk coagulates in the stomach. It forms a tough curd unlike the flaky curd of mother's milk. This is indigestible and consequently ferments. It causes the painful flatulence, the vomiting and other well known troubles. Our success in treating cow's milk and feeding a child thereon will depend almost entirely on the manner in which we deal with the casein to prevent this tough curd from being formed.

Two methods are advised:

(1) By mechanically preventing the particles of casein from running together.

* Read before the Ontario Medical Association, June 6, 1894.

(2) By chemically preventing coagulation by the use of lime-water or other alkalies. This latter plan is entirely wrong because to accomplish its purpose would require a quantity equal to one-third of the meal. In the former method various kinds of mucilaginous fluids are recommended, such as acacia, gelatine, isinglass or tragacanth.

The plan I have followed for some two or three years is to use for this purpose barley-water made from the common grain of the farmer, or preferably the same crushed. It serves to mechanically separate the particles of curd and has some nutritious properties as well. The mucilaginous material comes largely from the inner surface of the hull. In Scotch or pearl barley this is lost.

I give the mother written or printed instructions as to this plan of feeding. I have her use boiled water for dilution, also cream as the child grows older, for I have found that especially where the supply of milk is not first-class, fat, instead of being in excess, is often deficient in quantity. The deficiency of sugar is made up by adding sugar of milk. The acidity has not, in my experience, been an important factor.

The plan of quantities and times of feeding according to the age of the child is as the following table indicates:

AGE OF CHILD.	COW'S MILK.	BARLEY WATER.	BOILED WATER.	CREAM.	SUGAR OF MILK.	INTERVALS OF FEEDING.
1st week.....	4 Drams.	4 Drams.	.....	.....	15 Grains.	Every 2 hours, night and day.
1st Month, rest of	6 "	5 "	.....	.....	15 "	Every 3 hours, from 4 a. m. till 10 p. m.
2nd Month.....	9 "	6 "	3 Drams.	3 Drams.	20 "	Every 2½ hours, from 4 a. m. till 10 p.m.
3rd Month.....	12 "	6 "	6 "	3 "	30 "	Every 3 hours, from 4 a. m. till 10 p. m.
4th Month.....	16 "	6 "	8 "	4 "	45 "	" " "
5th Month.....	18 "	6 "	10 "	5 "	1 Dram.	" " "
6th Month.....	20 "	6 "	10 "	5 "	1 "	" " "
7th Month.....	24 "	8 "	10 "	6 "	1 "	" " "
8th Month.....	26 "	8 "	10 "	6 "	1¼ "	" " "
9th Month.....	28 "	10 "	10 "	7 "	1½ "	" " "
10th Month.....	30 "	10 "	10 "	8 "	1¾ "	" " "
11th Month.....	32 "	10 "	10 "	8 "	1¾ "	" " "
12th Month.....	34 "	10 "	10 "	9 "	1¾ "	" " "

This plan gives, as you see, 6 hours rest to the mother and child. Often the child will sleep longer in the morning.

Regularity in feeding is a very important matter and should be rigidly insisted upon. At all times if you will, but especially when the external temperature reaches 60° F., it is best to sterilize the milk. Instruct the mother or nurse to do this by placing the bottles filled with milk in a large steamer over a pot of boiling water. From one-half to an hour's steaming will suffice to completely sterilize the milk. The bottles should then be tightly corked and set aside in a cool place ready for use. The barley-water is made by adding a cupful of barley whole or crushed to a quart of cold water. This is slowly boiled until reduced to about one pint when it is strained and set aside.

Care is necessary in the selection of sugar of milk. The cheaper kinds contain a large amount of flour and chalk.

The most convenient feeding bottle is an ordinary 6 or 8 oz. R. S. P. one, of which several should be in use at once. They are easily kept clean.

Conical black rubber teats which fit nicely over the neck of the bottle are the best. Never allow a tube of any kind to be used. Both teats and bottles when not in use should after thorough cleansing in boiling water, be placed to soak in a solution of soda bicarb. or a weak solution of permanganate of potash.

Never allow the child to suck the empty bottle, such fills the stomach with air.

A proper graduated glass measure which can be purchased cheaply in any drug-store, is both a necessity and a convenience. Measuring by means of a teaspoon is out of date and inaccurate.

A wire bracket over lamp or gas jet is

convenient, whereby the food may be warmed at night. The temperature of the food when given to the child should be about 95° F.

The quantities I have marked down are, of course, subject to variations according as the child is large or small.

The cream acts well in keeping the bowels regular. If not sufficient an occasional dose of fluid magnesia, P. D. & Co.'s cascara cordial, or minute doses of calomel repeated will do very well.

The usual bathing and due attention to cleanliness all help to a good result. Any excoriation of the buttocks should be prevented by careful toilet and the use of borated talcum. Unless the weather is extremely severe, the child properly protected, of course, should be out one or two hours a day, summer and winter. In summer when the weather is fine the child should be out most of the time. Good fresh air is essential for good sleep and good digestion.

I think this plan of feeding, meeting as it does the essentials of good quality, simplicity and accessibility which I laid down as the requisites of an artificial food, deserves a trial.

It is not by any means new. It is within the reach of everybody, is not complicated, and, in my hands at least, has given good results.

ADDENDA.

In the criticism which followed, the proprietary foods, consisting as they do chiefly of starch which a child under 7 months old cannot digest, were strongly condemned. I cordially agree with this and advise that they never be used nor prescribed,

The question was asked if pot-barley or Robinson's barley flour would not do better than grain barley. I do not believe so since they do not contain that which is essential to a good barley water, viz: the mucilaginous material which lies immediately inside the hull of the grain. This is *Gluten,* which is not starchy but a nitrogenous material composed of *fibrin*, *casein*, *gliadin* and *mucedin* (Foster's Dictionary).

Objection was taken to the quantity of food during first week, viz: 4 drams of milk, 4 drams of barley-water. I think this may be excessive in some cases where the child is small. My quantities are however, not absolute but more to serve as a guide that anything else. This is necessary. The physician ought to be a better judge as to quantities than any one else, and it would, to my mind, be foolish to give a child all it wants or more and allow it, as was suggested, to vomit the excess.

One gentleman objected to sterilization at the temperature of steam (212° F.) and said that extensive experiments in New York showed that babies fed on sterilized milk did not thrive. This is new to me, for sterilization has long been lauded to the skies. My only answer to this question is, that sterilization alone will not suffice. Often milk will, I believe, agree well when sterilization is not pursued, the more especially when the milk is produced at home and not, as city milk frequently is, carted over miles and miles of dusty roads or railway. In winter I may say that I have not insisted on sterilization and I have had good results. It has been suggested to me that the food and care of the cows should be looked after. This is an important point. The stable should be clean and airy and the food not too strong.

Just as the variation of food or improper food taken by the mother may induce digestive troubles in the baby, it can be no less true with regard to the source of the milk wherewith we prepare the artificial nourishment. I may add that whether or not my plan is correct in theory, I am amply satisfied that it is practically so. The best evidence of this is that babies thrive well on it, have few digestive troubles and are sure to attract attention by their hearty, lusty appearance.

The Removal of Warts.

℞

Hydrarg. bichlor.	gr. v
Acid. salicyl	5j
Collodii	f3j

M.

This is applied every day, the upper crust of the previous application being removed before a fresh one is made. Usually after four applications the wart becomes so softened that gentle friction will remove it painlessly. If a further dressing is required, a five per cent. salicylic-lanolin ointment is all that is necessary.

For Chronic Constipation.

℞

Aloes	gr. iv
Strychniæ sulphat.	gr. ¼
Extract. belladonnæ	gr. ¼
Ipecac pulv.	gr. vss

M.

Divid. in pil. xij.

Sig.—One every evening.

—*Gazetta Medica di Roma.*

COMMUNICATIONS.

TREATMENT OF STRANGULATED HERNIA.*

JOSEPH RANSOHOFF, M. D., F. R. C. S.†

A strangulated hernia if unrelieved, means death. It is almost equally true that if the strangulation is relieved early, recovery is the rule that ought to admit of few if any exceptions. The fatal cases of to-day are those of septic peritonitis, of gangrene, of contusion, paresis, and in the aged, pneumonia. The salient feature in the treatment of strangulation is the diagnosis. Given the following complex of symptoms, an irreducible tumor, hard and free of impulse in the site of an hernial aperture, accompanied by abdominal pain, obstipation, nausea and continuous vomiting, the diagnosis is indisputable. It is in the absence of or ill-pronounced development of one or many of these phenomena that the cause for doubt must be sought. The physical evidences of the hernia are often defective. The tumor may be small, too small to make a perceptible tumor, and palpable only in the depth of its canal. In the presence of a loose or irreducible hernia on the opposite side, the real seat of the strangulation is easily overlooked, Where a large and a small tumor are present, the probabilities of strangulation are *ceteris paribus*, greater in the smaller one. Furthermore it may be said that, inversely to the size of the hernia, are the acuteness of development and the severity of the symptoms.

The absence of communication between hernial sac and peritoneal cavity, as shown by the suppression of impulse and irreducibility, is an infalliable evidence of strangulation if the constriction is at the neck of the sac. In large hernias, strangulation by bands within the sac is common, in which cases there will be an impulse and the hernia may be partly reducible.

Torsion is a loop within the sac, occlusion within a diverticulum, of the sac, acute inflammation as of the appendix may occur without the suppression of abdominal impulse, and without increase of tension in the totality of the hernial protrusion. To an experienced surgeon, increased tension is a most important evidence of strangulation. Through gaseous distension of the intestine and serous transudation within the sac, a hernia after two days' strangulation may resemble a cystic tumor in its hardness and elasticity. The detection of a pedicle deep in an abdominal orifice, may avert an error. A subperitoneal lipoma or a cyst may conceal the hernia and complicate the diagnosis. Inflamed and retained testicles, and deep-seated lymphatic glands have been mistaken for strangulated hernia. The error is trivial. To err in the other direction has often proved fatal.

The symptom which in my judgment is most calculated to deceive is that of pain. Until adhesions form about the neck of the sac or within it, or unless manual efforts at reduction have been made, a strangulated hernia produces little or no pain at the side of the tumor. If present, it is overshadowed by the colicky pains of obstruction and the dragging pain of a fixed omentum or intestinal loop. It is felt chiefly in the umbilical region. Until the extra-peritoneal soft parts are involved in the inflammatory processes, a strangulated hernia is not very tender, except over the line of constriction.

Nearly every strangulated hernia is obstructed. Therefore, vomiting and obstipation are capital symptoms. They are not pathognomonic. In acute cases, vomiting is an initial symptom. It is copious, recurs at short intervals, and may in *foudroyante* cases, within twenty-four hours change to regurgitation of feculoid or fecal matter, with persistent hiccough. Such vomiting can not be mistaken. But even in acute cases the vomiting may be limited to one or two seizures in the twenty-four hours. Such vomiting, associated with diminished renal secretion and albuminuria, may readily be mistaken for that of uremia.

Obstipation is the rule in strangulated

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hernia. Lavage may remove the contents of the lower bowel. After that the intestine is impervious. The cases are very rare in which strangulation involves the omentum alone.

In the beginning the intestinal current may not be interfered with. With continued fixation of the gut, it soon becomes impermeable. This applies to strangulation of the appendix caught in a hernia, of which a number of cases have been recently reported, and to that form of hernia in which only a part of the circumference of the gut is involved.

There are yet other cases of hernial obstruction in which the diagnosis can not be made in one or two days. They occur in the large irreducible scrotal hernias of the aged. There are present retardation only of the onflow of the intestinal contents, slight colicky pain, little or no vomiting, recurrent constipation. Gradually the bowel is distended to a point beyond which the rings can not be made to yield. Then ensues strangulation as in the acute cases. One or two weeks may pass before the latter makes itself manifest.

Cases will occur in which doubt can not be dissipated. The prudent and wise surgeon will deal with all these as cases of strangulation.

In the treatment of strangulated hernia, only two methods can claim consideration: 1, taxis; 2, operative interference.

TAXIS.

The indications for taxis are few; the contra-indications many. Taxis should be restricted to the subacute obstructions of old hernias. The smaller the hernia and the acuter the symptoms, the less is taxis indicated; never in these cases after the first twenty-four hours of strangulation.

The bowel may be irrepairably damaged before this, but not often. Gangrene may be present without the usual evidences thereof, such as local edema and redness, great tympanites, rapid and feeble pulse, albuminuria. To consider the absence of any or all of these symptoms as indication for taxis, means enlarging the mortality from strangulated hernia.

Should the effort at taxis be successful which, perhaps fortunately, in the class of cases under consideration it rarely can be, it is so at the risk of returning to the abdominal cavity a loop of intestine doubtful as to viability, or with adherent limbs, and a hernial fluid ready to infect the peritoneum. Every effort at taxis is a confusion of the strangulated intestine. The blood-tinged hernial fluid is an evidence thereof. In intra-abdominal strangulation it is never encountered. Rents of the peritoneal coat of the distended intestine, the dread of the surgeon in laparotomy for obstruction, are none the less likely to occur because the bowel is manipulated under the soft parts and through the medium of a water-pad.

When reduction by taxis is indicated, it should be done under full anæsthesia. The absolute relaxation thereby obtained is doubtless responsible for many of the successes of taxis. A time limit to the manipulation has been given by many. Two unskilled hands can do more harm with taxis in twenty seconds than a careful operator will do in twenty minutes. Forced taxis is an abomination which has been expunged from surgical practice. It has been my fortune to see but one case of reduction *en masse*. The efforts of taxis should be gentle, continuous, and gradually increasing in force. Lateral pressure and gentle traction upon the neck of the sac may, by straightening the bend of the gut at the point of constriction, open a passage for the escape of its contents and thus be the immediate precursor of a reduction.

Taxis should be resorted to but once. When it fails, herniotomy can not be too soon performed.

KELOTOMY.

An operation for strangulation is, *per se*, not dangerous. The measure of its gravity is formulated by the condition of the parts and of the patient at the time of operation. I have had thirty-seven operations for strangulated hernia, in every case but one. Of these, six ended in death, two from gangrene and peritonitis, one from pneumonia in a man of 70, one from heart failure in a woman with aortic regurgitation, and one through an error in judgment in adding the radical to the relief operation in a large scrotal hernia. In the sixth case, laparotomy was performed for reduction *en masse*. The intestine, which seemed viable at the time of opertion by lamplight, gave way on the fifth day. With my present knowledge the deaths from heart failure and pneumonia

might have been averted, by substituting cocaine for general anæsthesia, since in neither patient could it have been a question of radical operation. In a case recently seen, I made the relief operation, removing a mass of omentum the size of a walnut, and returned the intestine without inflicting enough suffering to elicit a moan. The patient was 68 years of age and the subject of cardiac asthma.

From the foregoing limited experience, the conclusion is justified that in an otherwise healthy individual, death does not follow herniotomy, except as a consequence of grave changes in the hernial contents or within the abdominal cavity. The full statistics of Hagedorn of 170 operations fully bears out this view. It includes cases treated between 1883 and 1890. The general mortality was 14 per cent. The death rate was *nil* in cases in which the large intestine was involved; 48 per cent. in cases where the small intestine and omentum were unchanged; from 22 to 48 per cent. in cases where it was ecchymotic or suspected of gangrene. These results are a vast improvement on those given by Benno Schmidt, Rose and authorities of Great Britain a few years before, according to which the mortality varied from 25 to 48 per cent. Thus is negatived the view that the modern methods of wound treatment have not influenced the mortality of operations for strangulated hernia. As operations are performed earlier, and larger experience improves the methods of dealing with the grave complications, the mortality will be doubtless still further reduced.

OPERATION.

Except in the hernias of infants and in the large hernias of the aged, and then only when the constriction is known to be at the neck of the sac, the incision should be ample. An utter disregard of the anatomic tunics will facilitate procedures. There must be no enucleation until the sac proper has been reached. To reorganize this will sometimes embarrass an experienced operator. When thickened and covered by pendulous masses of fat it may greatly resemble a part of the colon. In acute hernias containing a considerable sanguinolent fluid, the resemblance to a discolored intestine is very great. The presence of ramifying vessels in the sac is distinguishing. So long as there is a doubt, it is quite certain that it is *not* the bowel which is exposed. In very rare cases there may be no sac under the line of incision, an uncovered portion of the large bowel or of the bladder presenting. An exploratory opening such as would naturally be made into the sac as ordinarily found, would while elucidating the relations, be far from being a serious mishap, if it involved the bowel.

Is the sac to be opened? This question has been affirmatively settled for all times, if not for all cases. In every case in which the radical operation is to be performed, in which there is the least doubt as to the site of the constriction or the condition of the hernial contents, and always before the constriction is relieved, the sac must be opened; the constricting ring to be divided from within. In the hernias of very young children, where the surroundings might make the aseptic course uncertain, and in the large obstructed hernias of subacute course as seen in the aged in whom a confinement of two weeks might be serious, an external herniotomy is doubtless justifiable. Although I have seen a number of cases in which it seemed applicable, I have never performed one, nor is it probable that I shall. An irrespressible anxiety to see the condition of the hernial contents impels me to what was known as the greater procedure of internal herniotomy. The division of the stricture is always a most delicate operation, in which the hernia knife of Cooper is almost indispensible, the finger serving as a guide. Save in the very tightest strangulations, the intestines are readily displaced to permit the nicking at one or several points of the constricting band. To avert the danger of wounding the intestine, the constriction can be divided from without. In inguinal hernia it is feasible. In femoral hernia it ought not to be practiced, since it entails the division of the crural arch.

The constriction relieved, the hernial contents often have a tendency at once to slip into the abdominal cavity. This is to be prevented, for no intestine is to be returned until it has been thoroughly inspected below, at, and for some distance beyond the line of constriction. In hernias which have been irreducible from adherent omentum, it may be difficult to find the strangulated intestine. Often it is small. In not a few cases the intestine

can not be properly exposed until the adherent and thickened omentum has been excised, since, as a rule, it can not be returned, it might as well be radically treated first as last. In dealing with the omentum, too much tissue should not be included in the ligature; this should be tightly drawn, care being taken that in the necessary manipulation the thin-walled veins are not torn. After thorough disinfection, the omental stump should always be returned into the abdominal cavity and not be permitted to remain near or within the hernial ring. I have seen one internal strangulation consequent on the fixation of an omentum to the internal ring, after a radical cure had been effected by truss.

Hernias in which there is obstruction without strangulation are generally dry. The coils of intestine are reddened, covered often with fibrinous flakes, and often adherent to each other and to the sac wall. Such adhesions should always be severed, lest after reduction the obstruction continue. The greatest care is necessary in severing the adhesions which have formed within the neck of the sac. They must be looked upon as the barrier to peritoneal invasion from an ulcerated bowel. Even with the greatest care, a rent may be made here as the bowel is drawn into the wound. This accident happened to me during the winter before my class.

There are few things more beautiful to the surgical eye than the fast changing colors of a tightly strangulated intestine, relieved of its constriction. Within a few minutes, dark brown or even black, in turn becomes chocolate, purple, dark red, and pink before the intestine is normal. The contained gases pass on, the constriction groove becomes shallower and while you observe, peritalsis may be reestablished. Such an intestine can be returned with safety Here two things are to be remembered: 1, it is as unsafe to return a distended gut to the abdomen after herniotomy as after abdominal section; and 2, that false reductions can be made after an operation quite as easily as after taxis. The absence of the gut from diverticula of the sac, which may be present between the musculo-fascial planes or in front of the peritoneum, must be established by the finger within the belly cavity before the reduction of the hernia can be said to be assured. With a free severance of adhesions about the neck of the sac, a mass reduction is not possible after herniotomy. When complications such as these follow herniotomy or taxis, the opening of the abdomen is justifiable. In no ordinary strangulated hernia, however, is hernioceliotomy a proper procedure.

Introduced as early as 1590 by Rosset and in 1723 by Cheselden, this chimera was almost forgotten until Mr. Tait made an effort to revive it in a paper before the British Medical Association, in 1891. Possibly of service for the radical relief, for reasons almost obvious it can have no place among procedures for strangulated hernia.

The most important question entering into the treatment of this subject is what to do with gangrenous hernia. Shall the constricting ring be divided? The theory was long advocated, and recently again promoted by Banks, that the constriction ring should ordinarily not be divided in gangrenous hernias, on the ground that it has the development of general peritonitis. By the constriction the septic products of a hernia may be isolated for a time. But the peritonitis develops from within, and that without the direct implication of the intestine. In a case of gangrenous hernia which contained only omentum, death resulted from general peritonitis. Just beyond the neck of the sac was the colon fixed by the adherent omentum, and its wall rendered paretic through traction, was unable to resist the passage through it of organisms fatal to the peritoneum.

Gangrene of the omentum is rare. Its safety is found in the ease with which it forms adhesions to the sac wall, through which it then receives its nutrition. The case alluded to is the only one I have seen. Benno Schmidt questions altogether the existence of primary strangulation of the omentum. Of Hagidan's 170 cases, gangrenous omentum was only once the sole occupant of the sac. I have found reports of two other cases: One from Heidelburg; the other of W. H. Bennett, of St. George's Hospital. There is but one opinion as to the management of gangrenous omentum. Excision after ligation in healthy tissue, and return to the abdomen, generally ends in recovery unless peritonitis already exists. The three cases quoted all recovered, although

in each the radical operation followed that for strangulation.

When gangrene involves the intestine, the solution of the problem is far less easy. Since Ramdohr first successfully resected the gut for hernia in 1727, the possible success of primary excision has been conceded.

Of recoveries there have been many. But the measure, however ideal, has never gained firm footing among surgical procedures. This in face of the fact that the results from the alternative measure, that of the formation of an artificial anus, have been most deplorable. Recently Poulsen reports twenty-nine cases, with but four recoveries. Of thirty-five cases as treated at St. Bartholomew's, four were saved (*British Medical Journal*, June, 1891, i., p. 701.) Certain is it that all cases should not be treated alike, and that every case ought to be considered with reference, first to the condition of the intestine and its environments, and second to the probability of the patient to bear the shock of a prolonged operation.

A stragulation affects the gut either along the line of constriction, or at some or all points of the coil involved, or in the course of the intestine for a varying distance above the point of constriction. Where the constricting band binds the gut, a well-marked groove is made by direct pressure. The constriction, tight enough to occlude the caliber of the bowel, may not interfere with its vascular supply. If gangrene results it will be from pressure at the bottom of the groove and limited in extent. Except for the usually small ulcer in the constriction groove, the gut above and below may be normal in appearance. In the fruitless effort of nature to protect the general peritoneum, adhesions are quickly formed between bowel and neck of sac. In the attempt to sever these, the fragile wall of the bowel tears along the line of constriction. Doubtless many cases of this kind occur, the fecal outpour taking place at the time of the operation. To avoid this it might be wise to follow the practice of Mikulicz, who in every case of suspected gangrene opens the rings from within the belly cavity, thus making a laparokelotomy which permits, as he thinks, thorough isolation by gauze of the infected area. The difficulty appears in the fact that pressure gangrene limited to the furrow and made by the constricting band is not always easily recognized. Fortunately the tissues about it, whether torn by manipulation or not, are in a fair condition for partial excision and lateral suture, by which the patient may be saved the perils and annoyance of an artificial anus. Krumm reports such a case successfully treated, and Barette three, of pressure gangrene successfully managed in the same manner. In such a case the gangrenous area may profitably be inverted and the contiguous parts sutured in a horizontal fold. In the case of rupture appended, the aperture was treated as a gunshot wound, sutured, and the coil returned to the abdomen, but anchored for forty-eight hours to the wound by a catgut suture through its mesentery.

In some cases the force of strangulation, although influencing the circulation of the whole knuckle, appears to affect most seriously its central part and at a point farthest removed from the mesentery. It is clear that if in such a case excision were to be done, it could only be beyond the limits of constriction. The cyanotic gut about the really gangrenous center would ill support a suture. Let alone it will recover. The handling incident to suture might easily prevent it. Furthermore, in cases of this nature the gangrene is often more extensive than is apparent. Beginning generally in the mucosa, the serous tissue is the last, and therefore least affected. The fixation of the gangrenous area in the bottom of the wound, relying on nature to make the anus preternaturalis, appears to me sound judgment. The data on which this view is based differ from those which militate against the formation of a fecal fistula when the gut is gangrenous in its entirety.

First and foremost, the caliber of the gut remains patent, and death from inanition is rendered impossible. Again, the fistula which results will probably be small, and close in a few weeks or months without operative interference.

When gangrene involves the entire strangulated knuckle the appearances are sufficiently characteristic. Chocolate of dark slate-colored, denuded in patches of its peritoneum, covered with flakes of lymph and in a collapsed condition, it fails to react to mechanical or chemical irritation. The odor is feted before perforation has taken place. When the strangulation has been very acute, the changes in

and about the hernial sac need not be very marked. After the escape of a varying amount of turbid bloody fluid from the sac, the latter appears of a bright or dusky red, minus the glistening appearance of the normal serosa. When it is of older date, one after another of the hernial coverings are involved in the inflammation. They are welded together, in turn to break down. A fecal abscess is the result.

The most serious and far-reaching changes in gangrenous hernia are often found in the afferent portion. They may be said to involve its caliber, its nutrition, its contents and the peritoneum singly or together. Although long recognized, the dangers inherent in this part of the intestine have recently been strongly brought forward by Beneke. Above the constriction there is always some dilatation with more or less paresis and congestion of the intestinal wall. It may be dark in color and edematous from venous stasis. Possibly from the same cause its mucous lining secretes abnormally, and as a result, at times, enormous accumulations of fluid are found—according to Mikulicz from one to three quarts. This forms an excellent culture medium for bacteria and in the process of putrescence, toxines are formed, the absorption of which doubtless accounts for many deaths under the mask of acute sepsis from strangulated hernia before peritonitis has developed. The disintegration of this fluid gives rise to a fecal odor irrespective of the site of the constriction, and it is this fluid forced into the stomach and thence regurgitated that is so ofoten mistaken for fecal vomite.—(Mikulicz.) Furthermore the wall of a paretic and congested gut has no power to resist the pathogenic organisms which it incloses. Far above the constriction, hemorrhagic infiltrations, diphtheritic-like deposits on, or ulceration of the mucous membrane may ensue. This is far more liable to such necrotic changes than the outer tunics and there is no way of knowing how far the process has extended. In one of Kocher's cases the gangrene extended four inches, and in one of Tændler's six inches above the suture line. In a case not submitted to operation, the diphtheritic deposits were found six feet above the constriction.

When death follows hernia, the symptoms of peritonitis are rarely absent. In the majority of cases, even in gangrene, there is no perforation within the abdomen, and the course of the peritoneal infection must have been through the microscopically intact gut. That it may occur where the gut does not enter into the hernia has already been seen. It has long been known through Nepveu's investigations that the fluid transudate in a hernial sac is rich in pathogenic organisms before gangrene has developed. Benneke has recently shown that the bacteria readily pass through the wall of the paretic bowel and produce diffuse peritoneal infection. On microscopic sections he was enabled to trace their progress through the intestinal wall. (Before the French Surgical Congress, Clado has recently made similar demonstrations.) From these sources metastic infection in remote organs may ensue. The process is like that seen in other morbid conditions of the intestine; notably in typhoid fever and appendicitis, where peritonitis developes without actual perforation.

Equally important with the local, is the general condition of the subject of a gangrenous hernia in determining the plan of procedure. When delay has brought the patient to the verge of collapse, when even the shock from prolonged anæsthesia cannot be ventured, *that* must be done which most readily gives relief to the strangulation. It may be the opening of a fecal abscess, the division of the stricture, or the rapid fixation of the gut in the wound. Whatever the procedure adopted in the condition indicated, the result will probably be the same—death within a few hours or days.

In most cases, however, the condition is less deplorable and evidently tolerant of a somewhat prolonged operation. It is in this class that choice must be made between the establishment of an artificial anus, and resection of the bowel with immediate suture of the divided ends.

Authorities are at variance as to the value of the two proceedures. In England, Baker, MacCormac, Banks and Treves decidedly oppose the greater operation of resection. In this country the same opinions have been held, unless they have been recently influenced by the reports of successful cases of excision by McCosh, Richardson, Dawbarn and others. In Germany, Kocher's and Czerny's first

successes were followed by many failures which frustrated the natural desire of surgeons to make primary incision the normal procedure in gangrenous hernia. Finally Reidel's critical review of the statistics in 1883 made it appear that the preferable primary operation was enterostomy, to be followed by a second operation for the closure of the preternatural opening. From the first, Kocher has remained steadfast to the ideal operation, and in Mikulicz he has recently found a most able supporter.

The advantages and disadvantages of the two procedures are almost apparant. If primary resection is successful, the patient is well in from four to six weeks. If an artificial anus is successfully established, a second operation of a very serious nature must follow. The artificial orifice is as large as the bowel, and the mucous membrane is prone to prolapse. Such an opening never closes spontaneously.

While in a considerable number of cases the enterotome of Dupuytren might be successfully applied with the low morality of 5 per cent. (Korte), it will fail in many cases and be absolutely inapplicable in others. Again, according to Dupuytren, it should not be used for two or three months after the primary operation. It is during this interval that the greatest danger from artificial anus is encountered, that from progressive inanition. Recently Poulsen has used it twelve and even nine days after the first operation.

It has not yet been established how much of the intestinal canal is essential to the maintenance of nutrition, but where the fistula is above the mid-part of the ileum, rapid emaciation and death follow before any secondary procedure for closing it can be practiced. McCosh does not overrate the argument of statistics in the statement that the death rate of all cases in which an artificial anus is made, including the operations for its relief, is 50 per cent. The danger from secondary resection and enterorrhaphy is very considerable. Haenel mentions forty-three cases, with sixteen deaths and two failures.

To be successful, the artificial anus must be established in healthy bowel, else the dangers inherent in the afferent portion will not be removed nor will a free outflow from the intestine be secured. The only advantages therefore which can be claimed for this method are the rapidity with which it can be performed and the slight technical skill required in its performance. A further advantage is supposed to exist in the lesser danger connected with this, as compared with the major procedure of immediate resection.

There is hardly a subject in surgery concerning which statistics are so much at variance as are those relating to gangrenous hernia. According to Korte, of 111 cases treated by enterostomy, eleven ended fatally. Herman (quoted by Haenel) mentions eighty-three cases with seven deaths. On the other hand, Weil reports fifteen cases with thirteen deaths. Benno Schmidt places the mortality at 85.5 per cent. for the formation of the artificial anus, as against 71.1 per cent. for primary resection.

F. A. Southern, Surgeon to the Manchester Royal Infirmary, recently reports eighty-five cases of herniotomy with nine cases of gangrene. All of the latter died. In six, an artificial anus was made; in three, primary excision.

If statistics are of any value in solving the relative merits of enterostomy and primary excision, it is evident that the reports of scattered cases are far less weighty than such from a few and skilled operators, and from hospital records where nothing is concealed. Such a tabulation has recently been made by Mikulicz from seven large clinics of Germany and Switzerland. Of 168 cases of gangrenous hernia, 109 died. Of ninety-four in which an artificial anus was made, seventy-two died; mortality, 76 per cent. Of sixty-eight primary excisions, thirty-two, or 47.1 per cent. died. Of six intermediary resections, five died. It would appear from this that the mortality of primary excision is very much less than that of the lesser operation. But this can be accounted for by the certainty that the latter was often used as a last measure in conditions approaching collapse, and therefore precluding the major operation.

These statistics practically coincide with the very extensive and recent tabulation of H. P. Zeidler, of St. Petersburg. Of 289 cases in which primary excision was performed, 142, or 49.13 per cent. died. Of 287 cases in which an artificial anus was established, 213, or 74.22 per cent. died. This is an increase in the mortality, of 25 per cent. In the group of cases of artificial anus there were 5.55 per cent.

more of cases hopeless from the beginning than in the group of primary resections. This still leaves 17 per cent. of cases which might probably have been saved by primary excision.—(*Cent. f. Chir.* 1893, p. 62).

The advantages of primary resection are patent. Its disadvantages are, the time required for its performance and the danger of peritonitis from imperfect technique. In a measure both can be overcome. The first of these is probably grossly exaggerated. With separation of the mesentery and its closure by suture, to be followed by the continuous Lembert-Czerny suture by lateral anastomosis, or by the use of button or potato plates, not more than half an hour at most should be required for the enterorrhaphy. Complicated clamps, a separate row of stitches for mucous and serous tunics, interrupted sutures unnecessarily waste time. When the continuous suture is used and appears weak at points, a few supplementary stitches can easily be taken. Suturing the mesentery brings the intestinal ends naturally together and gives assurance that the most treacherous part of the suture, that near the mesentery, can be properly applied. The second danger is from injudicious selection of the lines for suture. As elsewhere in gangrenous processes, the danger lies rather in removing too little than too much. If Kocher excised five and Koeberle six feet of intestine, a few inches more or less can not be important. In acute cases, where the caliber of the gut has not been long occluded, and koproöstasis is little, if at all developed, an inch or two on each side of the constriction groove will probably bring the suture line in healthy tissue. Where the mesentery has not been included in the strangulation, the same favorable conditions may be expected. Where, however, much dilatation of the afferent gut exists, its thorough evacuation should precede the enterorrhaphy. After hernia, as after laparotomy for obstruction, it is fatal to return a distended gut to the abdomen. The further danger, that of septic infection of the peritoneum, can in a large measure be reduced by thorough irrigation of the sac before suturing; by careful handling of the gangrenous gut without the wound, meanwhile protecting the peritoneum by gauze packing. Finally, the sutured intestine should be left just within the abdominal cavity and a radical cure should not be attempted. Mikulicz, whose success surpasses that of any other operator—twenty-one cases with fourteen recoveries—insists on the open treatment of these cases. Should fecal extravasation ensue from defective suture or other cause, it would naturally turn towards the wound, whereby the danger of general peritonitis would be largely averted. For from two to five days after the operation the sutured intestine remains where it is placed within the abdomen, and after that length of time the development of peritonitis is not probable. To hasten the process of wound repair, deep and superficial sutures might be drawn through the wound margins and kept over the gauze packing, to be tightened without anæsthesia after the danger line has been passed.

Between the extreme measures considered, others looking toward a compromise have recently been brought forward by a number of surgeons. Among these are the intermediary, excision and suture of Riedel. The artificial anus is established in the usual way. After twenty-four or forty-eight hours the edges of the intestine are vivified and united by suture. In 1882 Bouilly suggested excision and suture, the latter being purposely made imperfect at one point to guide the fecal extravasation. To avert the danger from imperfect suture, Hahn follows the kelotomy with a median laparotomy. Through this wound he brings the divided ends of the bowel, thoroughly protecting the abdomen against infection by packing them in gauze. When the suture is completed, the closed knuckle is kept in the wound between gauze splints until union is assured. The competency of the suture is certain after twenty-four hours, when the bowel is returned to the abdomen and the external wound closed. It is difficult to understand why the same procedure should not be carried out in the inguinal herniotomy wound. Nevertheless, Hahn has had two successes with it, and in a third, reported by Kutschera, the result was equally satisfactory.

To overcome the danger from death from inanition, Helferich has recently combined enterostomy with an intestinal anastomosis above the constriction furrows. By this method two courses are open to the intestinal circulation, and the

closure of the artificial anus is greatly facilitated. The operation was done in two cases, one of which was successful, the fecal fistula closing spontaneously.

There is yet another class of cases in which the condition of the bowel is such that whereas gangrene is not yet present, it might through subsequent necrosis cause death if returned to the abdomen. Such a knuckle is a menace. Who has not seen it? Especially if operating by light, both artificial and bad. A bowel that is not at all doubtful in appearance will at times repay the trust placed in it by a perforation. Among ninety-six deaths after herniotomy, it was in twenty-six cases the result of returning to the abdomen intestine which subsequently perforated. In Hagedorn's clinic three deaths out of fifteen resulted in the same way. To return doubtful intestine is unnecessarily jeopardizing life. To treat such intestine as radically as bowel already gangrenous is an extreme measure, not to be advocated. Fortunately the intestine can be retained in the wound for a number of days in gauze packing or by sutures. When its viability has been established, it is an easy matter to return it to the abdomen. Graefe recently reported a successful case in which the intestine was so retained for five days before replacing it. Should the dread of adhesion be feared, the intestine might be retained just within the abdomen by fixation sutures or by gauze. In the event of gangrene, the fecal extravasation would course toward the external wound.

When in 1880 Czerny reported his first case of primary excision for gangrene, he believed that the operation would not displace the older operation of enterostomy. Although the last four years have brought forward success after success from primary resection, the dictum of Czerny still holds good. Each operation has its proper field. The boundary lines are becoming more clearly defined. Nevertheless, it must always remain for the judgment and tact of the surgeon, as individual cases arise, to determine the proper procedure to be adopted. In operative surgery, as elsewhere, the ideal should be sought. This would make primary excision the normal procedure in gangrenous hernia, and only cogent reasons should cause the operator to refrain from striving for the ideal.—*J. A. M. A.*

AUTHENTIC REPORT OF THE ASSASSINATION, OPERATION AND DEATH OF CARNOT, THE PRESIDENT OF THE FRENCH REPUBLIC.*

PROF. A. PONCET, LYONS, FRANCE.
[THE ATTENDING SURGEON.]

M. Carnot, the President of the French Republic, was assassinated the 24th of June, at about a quarter after nine, in the evening. Scarcely had he taken a place in the carriage which was to conduct him to the Grand Theatre of Lyons when he was stabbed with a poignard. In the same carriage there were, at his left, General Borius; opposite to him, Professor Gailleton, mayor of the city, who had at his side General Voisin, the military governor. The deed was done so quickly that one would have thought that either a petition or a bouquet had been thrown into the carriage. The President threw his body slightly backwards, rather with a look of disgust on his face than pain or fear. Those about him thought at the first moment, that some dirty object had been thrown at him. The President immediately carried his hand to the injured spot and thrusting it between his shirt front and undershirt, he withdrew it, covered with blood and exclaimed: "I am wounded". At the same instant his head fell backwards and he lost consciousness. Prof. Gailleton immediately cared for the President and the carriage turned and, at this monent, a few seconds after the stabbing had been done, I saw M. Carnot. He lay limp in the carriage, his arms extended inertly alongside of his body and his head thrown backwards. His face was frightfully pale, his eyelids half

*Translated from *La Semaine Medicale*, No. 39, 1894, by F. H. Pritchard, M. D.

closed, his eyes glassy, and, if now and then slight groans had not been audible one would have thought that all was over. In the midst of the great throng, the cries of the crowd and the noise of the carriage and the escort, it was impossible to gain an idea of either the state of his heart or respiration. His hands were cold and I was unable to distinguish any pulse. The collapse was so great that we feared his death at any moment. I removed the clothing that encumbered his breast, at the same time trying to obtain an idea of the seat and extent of the wound. Guided by the blood that colored the bosom of his shirt we easily discovered on the right side, at about three centimetres from the ensiform cartilage and beneath the corresponding border of the ribs, a wound twenty to twenty-five millimetres in length, slightly oblique, following the margins of the rib and apparently made with a cutting instrument. The quantity of blood that had been lost, to judge from the soaked garments, might be placed at about three-quarters of a glassful. The intense shock, the seat of the wound, etc., led us to diagnosticate a penetrating wound of the liver, with profuse internal hemorrhage. Besides there was no doubt an intra-abdominal wound of great depth, for at the moment that the stab was given, Professor Gailleton, who was facing the President in his carriage, heard a dull sound as from a very violent blow such as one given with the fist. Hence we concluded that the poignard had been thrust in clear to the hilt. I placed the President in a position so as to facilitate the flow of blood towards the nervous centres and to ward off death as long as possible; a handkerchief was applied to the wound and held there. All this time the horses were being driven at a gallop towards the prefecture where M. Carnot had his apartments, about seven to eight hundred yards distant.

On our arrival there, the President, who was in the same condition and had given no signs of life beyond feeble sighs and two or three unsuccessful attempts at vomiting, was carried to his rooms and placed upon his bed, with his head as low as possible.

While the necessary instruments, dressings and antiseptic solutions were being brought from the Hotel Dieu, napkins filled with ice were applied locally and attempts at rousing him were made by flagellation of the face, calling in a loud voice, etc. A few minutes later a bed was prepared for the operation in the same room, the illustrious patient was lifted onto it and the operation begun, which seemed to be the only means, if not of saving his life of, at least, prolonging it.

Convinced by another examination that a wound of the liver was in question and that the immediate danger was due to internal hemorrhage, I did not hesitate to perform lateral laparotomy, taking the wound as the point of departure. Introducing the left index finger through the original wound I had no difficulty in recognizing the subjacent liver. A clot of dark colored blood escaped after this rapid exploration. At this moment the collapse instead of diminishing appeared to become worse; therefore anæsthesia was out of the question. I immediately enlarged the wound from above downwards, by an incision from ten to twelve centimetres in length and running obliquely along the linea alba. I was struck by the little blood in the abdominal cavity. The subjacent viscera were easily wiped clear of blood, and on stooping down I perceived under the false ribs the left lobe of the liver to present a bleeding aperture on its convex surface. I explored this surface with the end of my index finger and I soon discovered a clean cut wound of eighteen to twenty millimetres length, corresponding well, in form and direction, to that of the skin. The blade of the weapon had penetrated deeply. During these manœuvres of exploration and local compression the hemorrhage ceased. A strip of iodoform wicking was substituted for my finger and introduced with a pair of long handled dressing forceps. A careful examination of the neighboring organs revealed nothing abnormal. The mesentery, the accessible portion of the stomach, the intestine, the gall-bladder, etc., were rapidly examined and found to be uninjured as I had supposed *a priori*, and neither gas, bile nor intestinal contents were observed to escape. The finger could detect nothing on the lower surface of the liver. From the first cut with the knife, under the influence of the pain, the President came out of the deep collapse. He complained of suffering at the site of the wound, and pronounced a few words: "Oh, doctor you hurt me," several times,

in a very intelligible and fairly strong voice. Once he said: "Look, I have typhlitis." At the same time his pulse improved, it then beating 140, although his general condition remained the same, so that we gathered a ray of hope. Up to then I had been assisted by Professors Gailleton, Lèpine, the military physicians Kelsch, Albert, Viry, Demandre, and the doctors Rebatel, Masson, etc. In the meantime Professors Ollier, Monoyer and Doctors Gangolphe, Fabre, etc., had arrived. Their assistance was of particular value.

With Professor Ollier I examined the depths of the incision again. My eminent colleague, whose great authority was so valuable to me then, examined the wound and recognized the hepatic wound, the necessity of hemostatic tamponing, and with common accord I made a second incision towards the median line, of five to six centimetres. The margins of the wound were turned outwards with the hemostatic forceps clinging to them and serving as tractors and another examination made. The piece of wicking which had been withdrawn was found to be soaked in blood. This we did not regard as of any great importance. To be assured we replaced it with another which was packed as tightly as possible into the wound. The surgical indications had been fulfilled.

Was it necessary to do more? Was the liver to be sutured? We did not think so and for various reasons. In the first place the grave state of shock contraindicated any operation of long duration. For in order to get at the wound which was two or three centimetres above the margins of the ribs, a resection would be necessary. The liver though of small volume, it either being normally thus or possibly from the rapid depletion of blood, was natural. After a consultation Professor Ollier and I proceeded to tampon antiseptically and arrest hemorrhage. The hepatic wound, was stuffed with iodoformized wicking; over the external wound, a layer of slightly iodoformized gauze and over this numerous layers of sterilized gauze were placed. For a long time I exercised slight pressure down upon the wound with the palm of my hand. We feared a return of hemorrhage and one of us held the dressing, alternately. Towards half past eleven, on taking off a few of the uppermost layers of gauze, we found the deeper ones infiltrated with blood. Some of these were removed, though in general we thought it rather due to imbibition of blood remaining in the abdominal cavity rather than to a continuation of the hemorrhage. Besides from the moment that the operation was commenced and the hemorrhage checked M. Carnot, as he assured us himself, came out of the profound collapse.

He answered clearly, with perfect lucidity, to questions; from time to time he took a piece of ice or a teaspoonful of iced champagne. Between eleven o'clock and midnight, at intervals of twenty to thirty minutes, two subcutaneous injections of a gram of ether were given. Towards midnight the President appeared to suffer greatly and two injections of the muriate of morphine (one-half centigram) were administered at regular intervals. Yet the patient did not react. His face was motionless, extremely pale and cadaveric; his pulse, which from time to time seemed to improve, became smaller and smaller; his extremities were cold and death apparently was approaching. With a calmness and resignation that were truely heroic he slowly became weaker, without a word of regret, or of blame. At no moment did he allude to the attempt on his life. Several times when attention was called to his sufferings he complained of pains in the epigastric region on a level with the wound, and in his loins.

When he asked for Colonel Chamoin, I informed him that he was there and that all his friends were about him. In a voice that was still strong, he said: "I am very much touched by their presence and I thank you for what you do for me." A few minutes after, and at a half hour after midnight, the signs of dissolution suddenly set in. At no time was there nausea, or vomiting, and though he was two or three times seized with difficulty in breathing, yet he remained calm till the end, which was announced by a few convulsive tremblings especially in the region of the diaphram and of abdominal muscles, so that if the dressing had not been firmly compressed the intestine would have been forced out. At this moment venous hemorrhage issued in a large quantity, confirming our opinion of internal hemorrhage. For immediately after the deed and during the long drive to the Prefecture in his

half-seated position, the blood had collected in the pelvic cavity and the iliac fossæ.

The necropsy was done at the suggestion of Professors Gailleton and Ollier. The family physician of the President, Dr. Planchon, who had arrived with Madame Carnot, was also present. The following is the record:

"The undersigned doctors of medicine have proceded to-day to the necropsy of the President of the French Republic. The following lesions were discovered:

1. The wound was situated immediately beneath the false ribs of the right side, three centimetres from the xyphoid appendix; it measured twenty to twenty-five millimetres, and the blade in penetrating completely severed the corresponding costal cartilage.

2. The blade of the weapon had penetrated into the left lobe of the liver from five to six millimetres and near the suspensory ligament. It perforated the organ from left to right and from above downwards, wounding in its passage the portal vein which it opened at two places.

3. The path of the weapon in the interior of the liver was from eleven to twelve centimetres. A mortal intra-peritoneal hemorrhage was the result of this double perforation of the portal vein.

Signed:

DRS. LACASSAGNE, HENRI COUTAGNE,
PONCET, OLLIER,
LEPINE, REBATEL,
MICHEL GANGOLPHE, FABRE.

LYONS, June 25, 1894.

The injury to the portal vein, in that laparotomy could not be done immediately after the attempt on the President's life, was necessarily fatal. But we were convinced that if he had survived this for three hours it was due to our intervention alone. Without, indeed, being able to diagnosticate the lesions of the portal vein, it is beyond doubt that the firm pressure over the wound sufficed to arrest the hemorrhage, for very slight compression will cause venous hemorrhage to cease. The reaction from the collapse was due to this.

TRANSLATIONS.

APPENDICITIS AND PERI-APPENDICITIS.

Cuffer (*Le Bulletin Medical*, June 24, 1894,) draws a distinction between typhlitis properly so-called (that is to say typhlitis of the cecum) and typhlitis of appendix. He says that in order for the fecal matter to harden and accumulate in the cecum there must exist primarily an extreme intestinal atony, a paresis of the muscular walls of the intestines. This may be brought about by an old inflammation such as dysentery, or an irritation of the neighboring peritoneum; in every case Stokes's law will explain the relative importance of the subjacent muscles. Certain exercises predispose to typhlitis, such as the game of croquet, which when played in a certain manner occasions repeated blows upon the region of the right flank; in the same order he has observed atony of the cecum and a stercoral typhlitis in a professional billiard-player. The bicyclist also is, through the exercise indulged in, rendered subject to the development of intestinal atony with predisposition to typhlitis.

The atony of the cecum once produced, no matter in what manner, there results a progressive accumulation of fecal matter; this gives rise to a vague pain in the right iliac fossa, a sense of ill-defined heaviness; the patient has an instinctive tendency to rest his hands upon this painful region. This constitutes the first period of typhlitis, the period of stercoral tumor; there may be found in the iliac fossa an elongated mass having the direction and the form of the cecum, non-painful, and giving on palpation the sensation of a depressible lump of clay. Under the use of laxatives this tumor will disappear, but the initial cause persists. Appropriate treatment must be instituted to prevent a new stagnation of the fecal material.

If no intervention is made, at a variable period a new phase appears; to the uneasiness succeeds a veritable pain, a pain

increased by motion, jolts, and exacerbated by palpation. In the place of the cecum may be found a thick mass, resisting and painful; this is the inflamed cecal wall; a fever exists, the belly is tympanitic, the tongue is coated, appetite nil, there are eructations, nausea, vomiting, all the phenomena clearly indicate an obstruction to the feces. At times in the beginning of this period there may be observed a diarrhœa—the diarrhœa of constipation; below the obstruction there is a congestion of the intestine with a glandular hyper-secretion. It is important now to administer a laxative or an electric bath; there follows a sudden and profuse escape of fecal material.

The painful phenomena demand attention. During the inflammatory period of typhlitis there exist paroxysmal exacerbations of pain. There are colics which approach in their characteristics the hepatic or nephritic colics. There is on the part of the nervous system an intense reaction in proportion to the extent and importance of the causal lesion; the meteorism, the intensity of the pains and their distant extension, the drawn face, the tendency to syncope, the feeble pulse, all seem to indicate a peritonitis, but there is no fever, and with rare exceptions no vomiting.

In appendicular colic the point of maximum intensity of the pain is found at MacBurney's point, and the pains are localized in the iliac fossa without any marked tendency to radiate to other portions of the belly. On the contrary in typhlitis accompanied by peritonismus (Gubler's name for irritative spasm of the peritoneum), the pain is more extended, more diffuse, more abdominal. Moreover one may feel the fecal tumor.

There are two main varieties of appendicitis. The first variety comprises those cases due to primary inflammation of the organ, from ulcerations due to various causes forming in the vermiform appendix and causing the appearance of a typhlitis of the appendix. In the second group are classed the forms which are due to the lodgment of a foreign body in the appendix and which evolve, so to speak, in two stages—a primary phase more or less latent corresponding to the stagnation of the foreign body in the appendix; then a second stage characterized to the inflammation of the organ. The foreign body may be very diverse; biliary calculi, apple seeds, kernels, fecal masses, scybala.

Symptomatology of appendicitis. Just as in the beginning of stercoral typhlitis there is a special morbid state characterized by the constipation with the formation of a fecal sausage, associated with appendicular colic. It it almost impossible to absolutely distingnish between cecal peritonismus and appendicular colic. This is the main phenomena of beginning appendicitis, viz., appendicular colic, single or repeated, intense or slight, occurring in paroxysms or alternating in general with a dull pain fixed at the level of the appendix. Fever does not exist; it is the pain with these special characteristics joined with absence of constipation which decides the diagnosis. —D.

Headache.

The following prescription embodies all of the therapeutic virtues claimed for the numerous proprietary "anti's" (with varying affixes) of unknown composition, with which the medical profession is being overwhelmed in recent times:

℞
Caffeinae citratis	gr. x
Acetanilidi	gr. xxx
Sodii bromidi	ʒ i
Sodii bicarbonatis	ʒ ii

Misce et div. in chart x. Sig:—One powder, repeated if necessary, at intervals of one hour.

Infantile Convulsions.

Dr. Jule Simon, in *El Siglo-Medico*, prescribes this combination:

℞
Chloralis	
Potassii bromidi	āā gr. xv
Codeinae	gr. ss
Tinct. moschi	
Tinct. aconitis radicis	āā M vi
Syrupi aurantii flori, q. s. ad	ʒ iii

M. ft. solut. Sig.—Dose: One teaspoonful, by mouth, or in enema if it cannot be swallowed.

Painful Pharyngitis.

Eng. Med. Press gives the following formula:

℞
Morphinae sulphatis	gr. iv
Acidi carbolici	ʒ ss
Acidi tannici	ʒ ss
Glycerini	ʒ iv
Aquae	ʒ iv

M. ft. solut. Sig.—Paint the throat two or three times daily.

For Psoriasis.

℞
Ichthyol	
Acid. salicylic	
Acid. pyrogallic	
Aristol	āā gms 2½
Vaselin	
Adipis	
Lonolin	āā gms. 30

M.
A powerful ointment, to be used in small quantities.

THERAPEUTICAL SUGGESTIONS FROM FOREIGN JOURNALS.*

HECTIC FEVER IN PHTHISIS.

Dr. A. von Szekely (*La Semaine Medicale*, No. 38, 1894,) advises the following mixture in the hectic fever of phthisical patients:

℞	Ergot.....		
	Salicylate Soda.....āā	10	o (℥ijss).
	Water.....	180	o (℥v ℥v).

Infuse the ergot in the water and then add the salicylate of soda. Four tablespoonsful per diem.

If one will produce produce a complete cessation of the fever for the whole night then let the patient take five tablespoonsful in the course of two hours during the evening. The ergot is added to prevent the roaring in the ears which accompanies the salicylate when given in large doses. (These two drugs are mutual antidotes according to a recent German writer). *Trans.* Of all the measures employed in hectic fever salicylic acid and particularly the soda salt which is better tolerated by the stomach are the most active remedies. A portion of the salicylic is elimated by the lungs as salicylic acid thus disinfecting in a certain measure, the decomposing products to which absorption the hectic fever is due.

SALICYLIC ACID LOCALLY IN RHEUMATISM.

Dr. Thomas Manley (*L'Union Medicale*, No. 71, 1894,) praises salicylic acid in acute articular rheumatism where it is claimed to exert a marvelous action when applied locally. In articular pains whether the joints be swollen or not, in lumbago, sciatica, intercostal neuralgia, as well as in gonorrhœal rheumatism it acts well. He employs the following formula:

℞	Chloroform.....	20	o (℥v).
	Tr. Opium.....		
	Salicylic Acid.....āā	16	o (℥iv).
	Alcohol.....	120	o (℥iv).
	Sweet Oil.....	360	o (℥xj).

To be applied locally.

TREATMENT OF CHOREA.

Prof. Dujardin-Beaumetz (*Revista de Ciencias Medicas de Barcelona*, No. 11, 1894,) before attempting to treat a case of this disease would differentiate the variety, for there first must beeliminated the chronic forms, double athetosis, cerebellar hereditary ataxia; these choreic affections are completely incurable. Ordinary chorea, Sydenham's variety, is divided in two great groups: 1. Chorea of rheumatic origin and chorea associated with hysteria; this latter variety is by no means rare in childhood. Cases in which these two factors are mixed give rise to therapeutic doubts. In the rheumatic variety it is wrong to reckon upon an effect from the salicylate of soda; antipyrine in four doses per diem of a gram in each will be much more efficacious. Legroux thinks that this remedy is inferior to the bromide of potash in the hysteric variety. Though phenecetine has not given constant results, exalgine on the contrary has yielded a number of rapid cures even in eight days. A moderate daily dose is 0. 40–0.75 in doses of 0.10. Dujardin-Beaumetz is of the opinion with Bardet and Moncorvo that a daily dose of 0.30 is quite large enough: antipyrine should be reserved for rheumatic cases. In chorea gravis he advises chloral (1.0–4.0). The hysteric variety is recognized by the stigmata of this affection, anæsthesia of the palate, other disturbances of sensation, hysterogenic zones, and a history of inherited nervous diseases. The bromide in a daily dose of 4.0–5.0 and arsenic are absolutely indicated; hydropathic measures are also valuable as they combat the depression produced by the bromide massage and gymnastics.

TREATMENT OF VULVAR PRURITUS.

In the (*Journal de Medicine de Paris*, No. 25, 1894,) the following treatment is advised:

1. Pruritus of diabetic origin. Examine the urine, if sugar be present regulate the diet, administer specific treatment and apply very hot water locally.

2. Pruritus dependent upon a chronic eczema of the genital organs a gonorrhœal vaginitis, simple leucorrhœa or vaginismus with reflex hysteric manifestations.

Allow no stimulating foods nor drinks. In profuse leucorrhœa either recent or chronic, inject morning and evening a warm two-quarts solution of permanganate

* In charge of the Translator, F. H. Pritchard, A.M., M. D.

of potash, 1:1000, into the vagina. Apply locally three times a day the following:

℞

Water	450	0 (℥xiv).
Alcohol 90 per cent	50	0 (℥ss).
Bichloride Mercury	1	0 (grs. xv).
Indigo Carmine		05 (gr. j).

When the burning and itching are severe, which is especially in the second half of the night, apply water as hot as can be borne. Avoid all salves with a fatty base as they are liable to ferment and to increase the irritation.

HEMICRANIA.

In the *Gazzetta Degli Ospedali*, No. 75, 1894, the following pill is recommended in migraine:

℞

Sulphate Quinine	3	0 (grs. xlv).
Powdered Digitalis Leaves.	1	50 (grs. xv).
Syrup q. s.		

Sufficient for thirty pills. Two to six during the attack.

TREATMENT OF EPITHELIOMA OF THE SKIN.

Dr. Gavino (*Journal de Medicine de Paris*, No. 25, 1894,) claimed to have cured all the cutaneous epitheliomas coming under his observation without exception, by application of the following paste:

℞

Fuming Nitric Acid	10	0 (℥ijss).
Bichloride Mercury	4	0 (℥j).
Berzelius' Paper. q. s. to form a paste		

Apply locally once every twelve days.

The most extensive epithelial cancers will yield in a short time to this topic application and cicatrization will follow rapidly and under good conditions.

RENAL ALTERATIONS IN SULFONAL POISONING.

Dr. R. Stern (*Hospitals-Tidende*, No. 13. 1894,) communicates a fatal case of sulfonal poisoning in a seventy year old woman who, suffering from a mental disease, had received about 175 grams of sulfonal in daily doses of a gram, at first and later of two grams. Though the drug was occasionally discontinued, eight days before death hematoporphynuria was observed and she died after having laid comatose for two days. The kidneys presented an extensive necrosis of the epithelium of the canaliculi especially in the tubuli contorti. In portions of the cortical section there were places where the epithelium could not be colored at all. The glomeruli were not distinctly affected, the capsules were somewhat thickened and contained here and there slight hemorrhages which were also found scattered through the renal tissues. Some increase of the interstitial tissue and thickening of the arterial walls. The latter he thinks are but senile changes while the extensive necrosis of the epithelium is due to the sulfonal alone. As soon as hematoporpharine or casts are observed in the urine the drug must be immediately discontinued.

AUXILIARY TREATMENT OF SYPHILIS.

Dr. Charles Stern (*Gazette des Hopitaux*, No. 74, 1894,) claims that though antisyphilitic treatment in persons in former good health will usually suffice it is by no means all that is to be done in managing this disease. There is besides an auxiliary treatment which must be considered. It properly consists of other remedies than specifics, hygiene and bathing. As to the combination of other remedies with antisyphilitic treatment there are many prevously existing states which affect and are affected by the ingrafted syphilis. Anema is one of the most important; it is rarely due to syphilis alone but existed anteriorly, at least in the male. In the female it is more frequent though if occuring after growth has ended and the organism has entered into a state of nutritive equilibrium it is less frequent. A sort of cachexia may result which inclination was present before and which the syphillis only unmasked. Though mercury has been claimed to increase the anemia Mauriac does not believe it. He regards it as a valuable reconstructive, and only to be discontinued when it is not tolerated or seems to have exhausted its strength. In the associated chloro-anemia, anemia and neurasthenia reconstituents must be employed. The iron preparations and tonics are not only compatible with mercury and iodine but they even favor their action.

EARLY TREATMENT OF SYPHILIS.

Dr. Jullien (*Muenchener Med. Wochenschrift*, No. 25, 1894,) believes in the abortive treatment of syphilis and that as soon as a chancre is diagnosed. He employs subcutaneous injections of calomel-1.0 calomel; 10.0, vasseline. A moderate

dose is injected every fourteen days deeply into the buttocks four to five cms. outside of the sacrum, under rigid antiseptic precautions. This prevents the development of the chancre and a later and much milder outbreak of secondary symptoms, after two to four months.

If one begin two or three weeks after appearance of the initial lesion this fortunate modification will not be observed. As to later symptoms he has after four years observation not seen them appear. Treatment must be continued for five to six months and the injection varied according to the individual; later one every twenty to twenty-five days will suffice. He believes it poor advice to await the development of the secondary symptoms and begin treatment when the whole organism has become infiltrated. A little cocaine added to the solution will prevent the pain of injection. He is a warm advocate to abortive treatment.

CHLORINE WATER IN DIPHTHERIA.

Dr. Schubert (*Wiener Med. Presse*, No. 24, 1894,) speaks highly of chlorine water as a specific in diphtheria. He has employed it in several severe cases of the epidemic variety, with brilliant results. The effect is seen at once, for progress of the disease is stopped, the fever drops, the general condition improves, the appetite becomes better, the throat clears up, and the membranes gradually disappear. This action is so characteristic that it is always observed. He prescribes the following:

℞ Chlorine Water..... 40 | o (5j¼).
Distilled Water..... 20 | o (3v).

In grave cases every hour, and in those less severe every two to three hours, a teaspoonful of this solution is administered; lengthen the intervals or decrease the dose with improvement. The other children and members of the family should take a teaspoonful two to three times a day as a prophylactic. Thus administered he has never observed an extension of the disease in families where it had broken out. As chlorine is the strongest bactericide its action is easily explained. He has never observed any disagreable consequences of this treatment so that the fear of using this remedy is wholly groundless; it is feared because it is not understood. On ccount of the acrid and biting odor it is best to hold the noses of small chiidren in giving it. The taste is not disagreable but somewhat sour.

LIVER AFFECTIONS AND EPISTAXIS.

Prof. Verneuil (*Muenchener Med. Wochenschrift*, No. 25, 1894,) believes that most all cases of epistaxis are due to a liver affection and if observed in children without distinct hepatic derangement then the disease is latent. He warns against stuffing anemic children having frequent nose-bleed with toxic drugs when these only increase the congestion and do no good. He has cured many cases by alkalies, vegetable diet and douches to the region of the liver.

FLECHSIG METHOD OF TREATING EPILEPSY.

Dr. L. Stembo (*St. Petersburger Med. Wochenschrift*, No. 15, 1894,) has tried in nine cases the Flechsig method of treating epilepsy which consists in prescribing first exclusively opium and then to follow this with the bromide, and with encouraging results. In all his cases the attacks ceased after a treatment of several weeks, the attacks either disappearing altogether or becoming very infrequent. He gives smaller doses of extract of opium than Flechsig, (0.02–0 06) several times a day for a month and increases the dose up to 0.24–0.36. Then he suspends the drug and prescribes the bromide 3.75–7.50 *per diem*, for four weeks. This dose is gradually diminished to 1.5 a day.

Urticaria of Children.

We find in *L' Union eMdicale* this prescription:

℞ Chloralis..... 5 i
Pulv. camphorae..... 5 i
Pulv. acaciae..... 5 i
Cereti simplicis..... 5 i

Mix and triturate well. Sig.—Apply locally to affected parts.

Acute Coryza.

℞ Morphinae sulph..... gr. i
Cocainae hydrochloratis..... gr. iii
Menthol..... gr. vi
Pulv. acidi borici..... 5 ii
Bismuthi subnitratis..... 5 iii
Pulv. benzoini..... 5 iii

M. Sig. — Snuff a pinch up nostrils several times daily.

—*The Medical Fortnightly.*

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SATURDAY, AUGUST 4, 1894.

EDITORIAL.

DO NOT TURN OUT THAT CLOT.

For more than a century at least, obstetricians have been practically unanimous in making one of the essentials in the treatment of post-partum hemorrhage, emptying the uterus of clots of blood. Turn out that clot, has been the constant and common chorus of obstetric teachers. Yet it sometimes happens that rules in medicine have exceptions; these rules are not always like Median and Persian laws in their unchangeable character. Though to some it may seem obstetric heresy it can be justly asserted that there are cases, very rare it is true, in which the injunction to turn out that clot, should be changed into, Do not turn out that clot. Two cases will be given in illustration of the advice here suggested:

The first is quoted from Contamin's* monograph, published in 1877: "There are nevertheless cases in which clots seem to oppose a barrier to the flow of blood. In one of his patients Professor Bouchacourt three times emptied the uterus of clots contained in it. Every time the effusion recurred, and clots were reformed in the uterine cavity. The patient was exhausted and syncope was imminent. As the size of the uterus was not very great and did not seem to increase, this condition indicating that the hemorrhage was suspended, the clots were left in the uterus." "The hemorrhage did not recur and the following day the clots were spontaneously expelled."

"In this case the clots had the role of an obstacle to the flow of blood, and one might ask what would have happened if the obstetrician had determined at all hazards to empty the uterus. Only in exceptional cases can this example be followed. Nevertheless we are authorized to temporize when the hemorrhage seems arrested, and especially when the consistence of the uterus indicates the return of its contractions."

The second case is found in the Transactions of the Indiana State Medical So-

*Etude sur les hemorrhagies qui surviennent pendant les suites de couches.

ciety for 1884, and is from that veteran, so honored whereever known, Dr. James F. Hibberd. Dr. H's patient was 28 years old, and the history is of her second confinement. "Her labor was rapid, and relatively easy, the second stage continuing about two hours. My hand upon the abdomen witnessed that the womb was fairly contracted immediately after the extrusion of the child, and then the ordinary time was consumed in attention to the child, say fifteen minutes. Turning to the mother I found that she was bleeding freely, which was not arrested by subjecting the womb to massage through the abdominal walls, nor was the placenta thereby passed down into the vagina. Promptly following up the chord the uterus was found in a state of hour-glass contraction, the constriction being about the middle, with the placenta in the upper division. With prudent haste I dilated the stricture with my fingers bunched pyramidally, to find the placenta not lying loose into its abnormal chamber, but more firmly adherent than I remember to have met with before, not peeling off from its attachment, as adherent placentas usually do, but requiring to be crushed off, as it were, by careful rigor with the ends of my fingers. This task performed, by external manipulation I secured contraction of the womb as I withdrew my hand, and immediately gave her a full dose of fluid extract of ergot, a medium dose of morphia and a moderate dose of alcohol, then sat down by the bedside with my left hand on the abdomen over the uterus, which was now slightly enlarged, my right hand fingers on the pulse, and awaited events. They came rapidly. In removing the placenta the patient's head had been placed on the same horizontal plane with her body, and it was left thus. Her pulse was quick and feeble. She was anxious and distressed, complained of flashes of heat and a sense of suffocation, the pulse failed rapidly, was no longer discernable, the breathing ceased, and all was quiet as the grave—my patient had fainted, and still I moved not, nor allowed any one else to move. No water to her face, no camphor to her nose, no rubbing 'of the extremities of my patient lying there in the similitude of death; but I sat and watched and hoped. Presently there was a faint wave at the wrist, then a half developed sigh, and anon the fullness of respiration in my patient and a restored circulation were the evidences of her return to conscious life, and still I sat and watched. In a few minutes the breathing was again hurried, another expressed apprehension of smothering, and again the pulse faded to indistinctness, and for the second time my patient had swooned from loss of blood, and yet another time no restoratives were applied, but the case left to the recuperative resources of nature, and they were equal to my anticipations and desires. The phenomea of active life soon re-appeared and reached a satisfactory state, etc." "No subsequent evil was manifest, and the patient had speedy and complete recovery."

From the comments made by Dr. Hibberd upon the treatment, the following are taken: "I deem it a fair scientific conclusion that where a syncope is due to a hidden loss of blood, or other acute impression in a system otherwise in a physiological condition, there will be an automatic restoration, unless the shock itself is fatal, and in such case the scene is closed at once, with, of course, no margin for help." "In my puerpera I looked for syncope, and desired it for remedial purposes." "The second swoon was not anticipated, but did not carry with it any apprehension of increasing evil, as it was not regarded as an evidence of continued hemorrhage because of the testimony of the hand still held in the inquiring position on the abdomen over the uterus." "If in this case I had become alarmed at the enlargement of the womb after the ex-

hibition of the drugs, and by massage or the insertion of the hand had removed the clot from the uterus and attempted to maintain a better contraction of the uterus by manual efforts or the intra-uterine use of ice or hot water, or a styptic, I am of the opinion I should have sacrificed my patient; and I am further convinced that if, misapprehending the significance of the syncope, I had called aid and instituted active measures of restoration, I should have done an uncalled for and unwise act, bringing my patient's interest into further jeopardy."

We have quoted quite fully from Dr. Hib berd's paper, not only for the enforcement of the truth that it is not always good practice to "turn out that clot," but for the graphic description of post-partum hemorrhage, as well as to illustrate the necessary calmness of the obstetrician in this great and immediate peril.

Whatever criticisms of the particular steps in the treatment may be made, whatever other obstetricians might have changed, or added, the result testifies very clearly.

And are we wrong in adding, wisdom is justified of her children?

But let it be borne in mind, that it is only in exceptional cases the obstetrician is right in departing from theestablished rule.

AN ERROR CORRECTED.

Some un fortunate and unexplained accident credits the article on "Placenta Previa Centralis" which appeared in the REPORTER for July 21, 1894, to the pen of J. Campbell Edin, M. D., C. M. (McGill), L. R. C. P., whereas the writer's name should have appeared, J. Campbell, M. D.,C. M. (McGill), L. R. C. P. (Edin).

ABSTRACTS.

THE PHYSICAL DIAGNOSIS OF GALL STONES.

Gebhardt observers that the attack usually begins four or five hours after the chief meal—that is, shortly after the entrance of the stomach contents into the duodenum. According to the size and position of the stone after it has passed into the common bile duct, distention of the gall-bladder may be recognized at once, or later (when the gall-bladder has been copiously filled, or not at all). The swelling lies between the right parasternal line and the anterior axillary line, mostly a little to one side of the right rectus muscle. If the gall-bladder is much distended it may give rise to errors in diagnosis. This distention only takes place in a minority of the cases. It may be absent owing to the smallness of the gall-bladder, or to the obstruction being incomplete, or lasting too short a time. It occurs in severe attacks, or in those who have had repeated attacks. The commencement of the attack may last a couple of hours without pain, during which time the ball-bladder may be palpable. The shrinking of the swelling shows the end of the attack. After a severe attack a friction sound, synchronous with inspiration and expiration, and sometimes of diagnostic value, may be heard over the gall-bladder. This is due to local peritonitis, and it explains the continuance of pain. An ice-bag is more useful here than warm applications. The liver may swell after severe attacks and fever be present. Attacks may occur with pain and fever, but there is neither swelling of the gall-bladder nor of the liver, and no stone is found in the stools. It is thought that the stone slips back into the gall-bladder, but other possibilities exist. The swelling of the gall-bladder may be due to obstructions having other causes; it does not occur in cardialgia. When, after several attacks no stone is found, no friction sound heard, and no swelling of the gall-bladder felt, cholelithiasis may, with tolerable certainty, be excluded, and neurotic hepatic colic may be assumed with great probability.—*British Medical Journal.*

TWO CASES OF GENERAL SUPPURATIVE PERITONITIS FOLLOWING THE RUPTURE OF A PYOSALPINX DURING LABOR; DEATH; AUTOPSIES.

BY RICHARD BARTLETT OLESON, M. D.

The writer was unable to discover any anatomical reason for the comparatively good health of the patients during the first twenty four-hours. In each case there was no obstacle to the free outflowing of the pus, and it would seem as though symptoms should have resulted at once, upon the end of labor.

CONCLUSIONS.

1. Particular attention should be paid by the obstetrician to a history of slight obscure febrile attacks during gestation, especially when there is any discoverable cause for a possible pelvic lesion. These attacks are generally referred to as "malarial" by the patient, but in a nonpaludal region, if quinine does not vanquish them, and an examination of the blood reveals nothing, the pelvic viscera may be looked to with decided profit.

2. In addition to the usual examination as to the condition of the urine, position of fetus, size of pelvic straits, etc., there should be in every case an attempt to discover the condition of the uterine adnexa, with an especial view to the possible existence of purulent collections, the limiting adhesions of which are partiularly liable to yield to the terrific strain upon the whole pelvic contents in childbirth. In the class of cases usually seen by the members of this society this will be found somewhat difficult, but where one is able to examine a woman before the ninth month of gestation the procedure should be fairly easy, and easy in direct proportion to the earliness of time at which the accoucheur is retained.

3. It should be regarded as an obstetrical axiom that no woman with a pyosalpinx should ever be allowed to enter labor carrying this pus in her body. Undoubtedly many a woman has gone through labor safely in spite of the existence of this condition, but it never can be considered as anything short of an accident which ought not to again occur. The powder magazine was there, the match was applied but for some reason the powder did not burn. If all statistics could be known undoubtedly even such a *dernier resort* as Cæsarian section, would be found to offer better results both as to mother and fetus, then the persistence of the pyosalpinx unmolested, especially an aseptic Cæsarian section performed as an operation of convenience and election.

4. If a woman with a pyosalpinx has once entered upon labor there is then no precaution, short of a laparotomy, which may be taken by the obstetrician, that can avail him anything in the pervention of general peritonitic infection. No detail of strict asepsis should be neglected, yet in spite of all endeavors tearing of the slight adhesions about the tube may occur, with most lamentable consequences.

5. It is especially noteworthy that in both of these cases labor was very rapid of completion and the pains strong and expulsive. Evidently this fact has direct bearing upon the causation of the rupture of adhesions.

6. Contrary to the general idea, the fact that over twenty-four hours have elapsed since the delivery of the placenta with no bad symptoms whatever, does not militate against the diagnosis of general suppurative peritonitis, due to a ruptured pyosalpinx, and the sudden rise of temperature occur for which no other local nor general causes may be found.

7. The early diagnosis of this affection is especially difficult, because:

a. The abdominal parieties are very much relaxed, thus requiring considerable gaseous distention to exist before tympanites is noticeable or the liver dullness interfered with.

b. The prevalence of after pains is so universal that the first subjective symptom, the danger signal, may be entirely overlooked, being attributed to a cause entirely separated from the true one.

c. In at least a certain proportion of cases collapse, vomiting and abdominal pains may be entirely wanting, and symptoms be referred to another part of the body.

8. Once developed, any intrauterine measures looking to the relief of this disease are worse than useless, only serving as a means of wasting priceless moments. There is but one treatment affording the least chance of help, immediate laparotomy under strict asepsis with drainage, aided by free saline catharsis.

CURRENT LITERATURE REVIEWED.

IN CHARGE OF ELLISTON J. MORRIS, M. D., AND SAMUEL M. WILSON, M. D.

THE AMERICAN JOURNAL OF THE MEDICAL SCIENCES.

for July. Dr. W. T. Lusk contributes a paper on the

Relative Values of the Various Surgical Methods of Treating Uterine Fibroids.

The author asks the question whether, if the uterine growth is of small size and the pain and vesical discomfort are slight, it is not good practice to delay a little, and control, if need be, an attendant menorrhagia by the curette, by the tampon, or ergotine, or the methods of Apostoli. He declares that the argument in favor of more radical measures, because of the supposed liability of myomata to malignant changes, especially in patients nearing the climacteric, has clinically little weight. Of the palliative measures, he says that curetting unquestionably furnishes the greatest number of disappointments. He reports a case in which a daily combined uterine and vaginal tampon of iodoform gauze caused a diminution of one half in the size of the tumor. Of vaginal enucleation he says, "The operation is, of course, applicable to tumors of small sizes. It would be contra-indicated in multiple and subserous fibroids, by inflammatory conditions, and in fixation of the uterus by old adhesions. Great care needs therefore, to be taken in the prefatory diagnosis. Not only should careful bimanual examination, (best under ether) be employed, but the cervix should be sufficiently dilated to permit the most thorough digital exploration of the uterine cavity. Nor is it to be forgotten that the good results which have restored the method to favor are due to aseptic methods. During the operation nearly continuous irrigation of the uterine cavity should be employed, and at its completion the emptied sac should be carefully packed with iodoform gauze." When radical measures are deemed necessary, the author thinks that, where practicable, vaginal hysterectomy should take precedence of the abdominal form. When the tumor much exceeds the size of a child's head, it is as a rule advantageous to attack it from above. The question of castration is a legimate one although it has been decried of late. The author quotes the expressions of others on the subject and seems to be of the opinion that in certain cases it may be the best procedure. It is not to be performed in large tumors or cystic growths or where adhesions prevent the complete removal of the ovaries. Under favorable conditions, complete extirpation of the uterus is the wisest course; but excessive anæmia, a feeble circulation, or the length of time needed to separate adherent viscera should be taken into consideration. All pedicled growths should be tied off and the uterus allowed to remain. The author is of the opinion that complete extirpation of the uterus is a more severe and mutilating operation than the supra-vaginal amputation.

Dr. Frederick P. Henry gives the

Clinical Report of Two Cases of Raynaud's Disease.

The author thinks that many cases of symmetrical gangrene reported as examples of Raynaud's disease have an anatomical basis in endarteritis obliterans, but they are in his opinion spurious. There is little to support the theory that peripheral neuritis is the cause of Raynaud's disease, and the author thinks that the theory of arterial spasm is most in accord with the clinical phenomena. In those cases in which hæmoglobinuria is observed the author thinks this symptom dependent on an excretion of hæmoglobin which has been separated from the red corpuscles in the peripheral asphyxiated parts.

The paper is illustrated with colored cuts of the condition as presented by one of the cases reported.

Dr. Thomas G. Manley contributes an article on

Gonorrhœal Arthritis,

reporting several cases. He divides the cases into the sub-acute, or abortive and the acute severe gonorrhœal arthritis. The one symptom more valuable than all others in these cases is the persistence of pain and inflammation in one articulation. Another is the chronicity of the effusion into the joints. In the treatment he states that effective remedial measures are efficient in practically all cases of gonorrhœal arthritis, if the cases are seen before organic changes have taken place in the joints. For internal medication mercury occupies the first place. First as a purgative and hepatic stimulent, and secondly in small, but oft repeated doses as an antiphlogistic. It may be administered by inunction, fumigation, hypodermatically or by the mouth. It should be given with a free hand until there are signs of amelioration or its toxic action is becoming manifest, when it should be discontinued. Pain will require the use of anodynes. If there is a malarial, rheumatic, or strumous complication, quinine, colchicum, and the alkalies, or cod liver oil should be freely given. The body should be at complete rest; in a comfortable position. Of local treatment the author places the local abstraction of blood as the most effective of all local measures in the early acute stages. The author does not approve of the use of any orthopædic apparatus in the early stages of the disease. But when the intensity of the malady passes over, as the joint is temporarily crippled, a comfortably adjusted bandage

serves a most valuable purpose. Protracted immobilization in plaster-of-Paris is of little use unless the joint is hoplessly destroyed, when the support which it contributes fixes the articular surfaces until ankylosis is complete. Hot or cold applications, emollient poultices, rubefacient plasters, and even the actual cautery, each and all have their place. Surgical intervention is occasionally demanded in grave cases of the disease. Injections of antiseptic substances in the joint have never been successful into the author's hands. When aspiration shows the presence of pus in the joint and constitutional disturbances are marked, then an incision into the joint, with free irrigation should be tried. When the articulating surfaces have been honeycombed by erosions and penetrating ulcers the joint must be sacrificed. The author is of the opinion that, as the system in these desperate cases is in a depraved state and the recuperative powers are very feeble, the only means which holds out any hope of saving life is amputation.

As the result of his experience the author comes to the following conclusions:

First, with reference to diagnosis. This is not difficult to decide when the differential characters of rheumatism and of tuberculosis are remembered. In all of his cases except one there was undisputed evidence of gonorrhœa, though the specific microbe was not found in all.

In none of his cases did perfect functional restoration follow the disease. Hence, urethral arthritis must be regarded as one of those diseases in which complete resorption of inflammatory deposits rarely if ever occurs.

The author's observations lead him to ignore the general view that it is a masculine disease, as there were in his cases, an equal proportion in each sex.

The treatment must be energetic and antiphlogistic. Mercury, if given early, exercises a most salutary influence in the course of the malady. If rheumatism is suspected as a complicating factor, then colchicum with the alkalies is useful.

The local management of the affected part is important. In the early stage free abstraction of blood; later, blisters, lotions, the bandages, etc. After the acute stages have passed, then moderate motion should be instituted if we would avoid or limit the ankylosis.

Myomectomy as a Substitute for Hysterectomy.

is discussed by Dr. E. C. Dudley. Myomectomy he says, should be supplemented by removal of the appendages in the three following classes of cases:

1. Cases in which the appendages are the seat of such disease as would demand their removal under other conditions.

2. Cases in which the enucleation of the tumor or tumors has so injured the uterus as to render it incapable of performing its functions, especially if the injury be such as would cause cicatricial atresia at the uterine ends of the Fallopian tubes. This might be the occasion for the removal of the appendages on one side only. With increased experience this class ought to diminish.

3. Cases in which the uterus contains an additional myoma so inaccessible as to make enucleation extremely hazardous.

The Treatment of Inoperable Malignant Tumors with the Toxines of Erysipelas and the Bacillus Prodigiosus

is the title of a paper by Dr. William B. Coley. In the paper he reports a number of cases, and as the result of his experience presents the following conclusions:

1. The curative action of erysipelas upon malignant tumors is an established fact.

2. Its action is much more powerful in sarcoma than in carcinoma.

3. This action is chiefly due to the toxines of the erysipelas streptococcus, which may be isolated and used with safety.

4. This action is greatly increased by the addition of the toxines of bacillus prodigiosus.

5. The toxines to be of value should come from virulent cultures and should be freshly prepared.

6. The results obtained from the use of toxines without danger are so nearly quite equal to those obtained from an attack of erysipelas, that inoculation should rarely be resorted to.

Appended to the paper is a tabular statement of the cases inoculated by the author.

The remaining paper in this issue is "On the Value of Ophthalmoscopic Corneal Images" by Dr. Ernest E. Madox.

For Painful Defecation

Attending inflammatory pelvic conditions, Dr. Murray (*Norsk Magazin for Lægevid*) recommends the following:

℞

Bismuth subnitrate	gr. ijss
Mercurial ointment	gr. iss
Extract of belladonna	gr. iv-v
Cacao butter, q. s., for one suppository	

Sig —Two suppositories a day. The bismuth is added to prevent irritation of the mucous membrane of the rectum.

In the German army the following application is employed for the rapid cure of *blisters* of the feet incident to long marches.—*Therapeutic Gazette.*

℞

Saponis nigri	p. 52
Aquae	p. 27
Vaselin	p. 15
Zinci oxidi	p. 6
Essentiae lavandulae, q. s.	

M.

Useful in Bronchitic Asthma.

℞

Potassii iodidi	3ij
Ammon carb	5j
Tinct. lobeliae	f3ij
Sp. chloroformi	f3iv
Vin ipecac	f3j
Infus senegae, q. s. ad	f3vj

M.

A tablespoonful in a wineglassful of water every four hours.—*Med. Press and Circular.*

Application for Chronic Pharyngitis.

℞

Iodi	gr. vj.
Potassii iodidi	gr. xij
Mentholis	3j
Glycerini, q. s. ad	3j

M.

Apply with a camel's-hair brush twice or thrice daily.

PERISCOPE.

IN CHARGE OF WM. E. PARKE, A.M., M. D.

MEDICINE.

What We May See in the Sputum.

Microscopical examinations have so far superceded the older methods that we frequently overlook many valuable points of diagnosis that might be observed with the unaided eye. We may first observe the quanity, reaction and consistence.

Patients with bronchitis or cavities, and especially cases of bronchiectasis, have the largest quantity.

Unless contaminated with vomited matter, sputum is always alkaline.

Mucus sputum usually occurs early in acute bronchitis.

Muco-purulent sputum in chronic bronchitis and in phthisis, or in later stages of acute bronchitis and pneumonia.

Purulent sputum (nearly pure pus) indicates a cavity or an empyema.

Serous sputum is fluid, and contains albumen, and is frothy. Characteristic of edema of lungs.

Blood expectorated from the lungs is usually bright red, frothy and alkaline. From the stomach it is dark, nearly brown, and acid in reaction.

Coal soot makes a black or gray sputum.

Fibers and pieces of lung tissue indicate a cavity.

Fibrinous casts indicate fibrinous inflammations. These are frequently found in croupous bronchitis.

Rectal Alimentation.

Huber has recently shown by actual experimentation, that from fifty-eight per cent to seventy per cent. of fluid egg albumen may be absorbed from the rectum without peptonization. A slightly larger proportion of albumen was absorbed after peptonization, but less than half as much when chloride of sodium was not added. The proportion of salt found necessary to stimulate absorption, was one gramme, or one-fourth of a drachm for each egg.

Diet in Ulcer of the Stomach.

Doctor Roux declares that in ulcer of the stomach, food should be chosen that are digested in the intestines, such as milk, eggs, starches, fruits, and green vegitables; farinaceous substances and eggs should constitute the chief diet. Lentils are preferable to potatoes and beans; among green vegetables salads are excellent; green peas, turnips and carrots should be mashed before eating. Light puddings are easily digested, especially if they contain eggs.—*Journal d' Hygiene.*

Vomiting of Pregnancy.

A writer in the *Lancet* says: "I have not failed once for many years, by a single vesication over the fourth and fifth dorsal vertebræ, to put an end at once to the sickness of pregnancy for the whole remaining period of gestation, no matter at what stage I was consulted. The neuralgic toothache, and pruritis pudendi of the puerperal condition yielded as readily, and to one application."

Beta-Naphthol in Typhoid Fever.

The author, Dr. Petresco (*La France Med.*,) has treated 647 typhoid cases with Beta-naphthol, alone or associated with quinine sulphate,—the former in doses of 3–4 grammes (45–60 grn.) daily, and the quinine in the daily dose of 1–2 grammes (15–30 grn.) He prescribed, instead of water, lemonade containing $\frac{1}{2}$ per cent. of sodium benzoate, or $\frac{1}{10}$–$\frac{1}{8}$ per cent. of benzoic acid. In the grave ataxo-adynamic forms, he applied wet packs. The author has arrived at the following conclusions:

1) Typhoid fever treated from the beginning with beta-nayhthol, can be mitigated and even arrested.

2) The proper dose of naphthol is 3–4 grammes (45–60 grn.) pro die, administered in twelve cachets at hourly intervals; this dose to be repeated every day until recovery sets in.

3) This treatment arrests the phenonema of auto-intoxication or secondary infection. The malady follows its natural, cyclic course.

4) This treatment is incompatible with that by alcohol or alcoholic beverages, since alcohol is a solvent of beta-naphthol.

The Effects of Quinine on Pregnancy.

A collective investigation of this subject is published in the *Indian Medico-Chirurgical Review* for February, 1894, the results of which are as follows:

1. The existence of pregnancy is no bar to the administration of quinine.

2. For fevers and other affections during pregnancy in which quinine is indicated the effects of the drug are more marked than those of any other.

3. That abortion following the administration of quinine is either the result of the original malady or the effect of idiosyncrasy.

4. That allowing for an idiosyncrasy, in cases in which a tendency to abortion exists, and in others as a matter of precaution, quinine is best administered combined with a sedative (opium).

5. Hence the old-standing view of the action of quinine on the duration of pregnancy is not borne out by the clinical experience collected in the replies.

The Nature and Treatment of Acne Vulgaris.

D. Philippson (*Therap. Monats.*) Nothing absolutely certain is known as to the origin of acne or the causal process which leads to stoppage of, and inflammation in and about the glands. As Dr. Philippson points out, the treatment is consequently symptomatic. In those severe cases which are characterized by cutaneous and subcutaneous abcesses, by the formation of cysts with thread-like contents, and the production of irregular, disfiguring scars, surgical treatment is the best. Enclosed suppurative foci should be opened and the contents squeezed out, indurated tissue be incised, and strong (50 per cent.) salicylic acid plaster applied to keep the incisions open. Compresses of aq. plumbi and acetate of aluminium may also be used with advantage, as they thoroughly soften the tuberous parts which have been incised, and by causing them to retrogress make the pustules disappear. For acne of the second degree (Philippson distinguishes three degrees), *i. e.*, when there are numerous comedones and nodules, pastes should be used containing soap, salicylic acid, beta-naphthol, resorcin, sulfur, etc. The following formulæ are employed in Lassar's clinic (*Prov. Med. Jour.*)

1. Beta-Naphthol..... ..... 3j
   Vaselin flavi
   Saponis viridis..... ..āā 3ij.
   Sulfuris Præcip..... 3v.
   M f. pasta. (Lassar.)
2. Beta-naphthol
   Camphor trit.
   Vaselin flavi.....āā 5j.
   Pulv. cret. alb..... 5ss.
   Saponis viridis..... 5jss.
   Sulf. præcip..... 3v.
   M. f. pasta. (Œstereicher.)
3. Resorcin
   Zinc. oxid
   Amyli puri.....āā 5ij.
   Vaseline flavi..... 3vj.
   M. f. pasta (Isaac)

St. Louis Med. and Surg. Jour.

Dr. Octinger, of Paris, has been carefully investigating the effect of treating small-pox patients in the dark, at any rate in light entirely deprived of actinic rays, as in a photographic laboratory. The windows were fitted with red glass, the doors guarded by thick curtains, all artificial light was excluded, except that of a photographic lamp with red and yellow glass, the latter only being used in case of absolute necessity. The conclusions arrived at are that so far as concerns the evolution of the primary disease the darkness has not shown itself to be in any way an efficacious treatment of small-pox, but that it is certainly a therapeutic means of considerable effect against the eruption. This developes more rapidly and although pus is formed it dries up more quickly and one escapes not only the ugly cicatrices, but the accidents arising from suppuration are considerably diminished. In a word, the darkness as a therapeutic agent in small-pox is above all a local treatment.—London letter in *Chicago Clinical Review.*

Seasickness.

After a recent voyage, seasickness is a subject which naturally comes up. It may be to others, as it was to me, a kindness to draw attention to a series of articles which appeared recently in the *New York Medical Journal* entitled "Recent Studies in Naupathia, or Seasickness, Symptomatology, Diagnosis, Pathogenesis, and treatment by a New and Efficacious Method." It was written by Dr. Winslow Warner Skinner, who, as ship's surgeon on several trans-atlantic lines, had taken advantage of many opportunies to study the diseases. A complete synopsis of his paper is too long to insert here, but the conclusions upon the pathogenesis and treatment are of most interest. They are as follows:

"1. The principle symptoms of naupathia result from the lowering of the patient's arterial blood pressure. This is a condition *sine qua non* of their development.

"2. Seasickness in a person otherwise healthy and not to aged is *promptly curable* in the vast majority of cases.

"3. Even in aged persons, or in persons having certain affections of the circulatory apparatus, there is often amelioration of the general condition by the employment of the new method of treatment.

"4. The treatment consists in the hypodermic injection of from half a milligramme to a milligramme of atropina sulphate, associated with a milligramme of strychnine sulphate (or nitrate,) dissolved in a cubic centimeter of distilled mint water.

"5. The administration of these eminently toxic substances demands a great degree of attention, prudence and supervision on the part of the physician, who alone should be the judge of the opportunity of their administration and of their dose in each individual case. Given at proper times and in suitable doses, however, no harm whatever will follow their administration. London correspondent *Cleveland Medical Gazette.*

Salycilate of Soda in Tonsilitis.

This remedy is recommended as little less than a specific in acute cases. It should be given as early in the attack as possible and in sufficient doses to cause ringiug in the ears. Fifteen grains every three hours will usually cause this effect, when the dose may be diminished to 10 and then to 5 grains at the same intervals. It should be continued for a day or two after disappearance of the fever.—*N. C. Med. Jour.*

IVY POISONING will soon be seasonable; and while it is well for people who resort to the country during the summer to be careful while they pick wild flowers, it may be of use to them to know that, according to a series of cases recently reported by J. Abbott Cantrell, M. D. (*Philadelphia Polyclinic,*) Labarraque's solution (solution of chlorinated soda) is an excellent remedy. It should be applied in full strength by means of a pledget of lint or of diaper cloth, kept constantly wet with the liquid. It will effect a cure in from three to five days.—*The Sanitarian*

The Blood in Melancholia.

The author examined the blood of twelve patients and the analysis gave the following results:

1. In acute or chronic melancholia there was a marked diminution of the number of globules; in very few cases the percentage approached the normal. Hemoglobin was reduced in the same proportion.
2. A number of cases show considerable curvation of the globules, becoming less marked after a tonic course.
3. Systematic tonic treatment is very efficacious in the treatment of this form of insanity.

The administration of iron alone or combined with quinine and strychnine seemed to answer best. It showed that although melancholia cannot be produced by poverty of blood, yet that the latter is always associated with the former and the improvement in the symptoms coincides with the improvement in the general health and quality of the blood.—*Omaha Clinic.*

Treatment of Laryngeal Phthisis.

Dr. Hajek presented a patient with laryngeal tuberculosis upon whom he had tried a new treatment. The infiltration of the epiglottis was so great that the man could no longer swallow. Dr. Hajek removed the entire epiglottis by means of a galvano-caustic loop, and treated the wound with lactic acid. Four weeks later the patient was able to swallow with ease. Since then he had curretted one of the vocal cords which was ulcerated. This was also dressed with lacit acid and healed readily. It is now one year since the epiglottis was extirpated, and the cure is maintained. The patient has increased in weight 19 kilogrammes (38 pounds), proving that his general condition is better. Dr. Hajek stated that he had already extirpated the epiglottis of three patients. The operation is easy, and there is no great danger of hemorrhage. It is indicated in cases of infiltration or circumscribed tumors. The case proves, besides, in his opinion, that the prognosis of laryngeal phthisis is not so grave as one would suppose.—*La Semaine Medicale in Southern Practitioner.*

The Treatment of Eczema of the Ear.

A brief note in the *Journal de Medicine de Paris* gives the following directions. In moist eczema of this region, where the eruption is confluent and behind the ear or in the auricle, it is well to wash the parts with a very weak solution of bichloride of mercury, which should be warm. This should be done three or four times daily. After the parts are thoroughly disinfected, they may be dressed by an application of iodol, the auditory canal being closed by a pledget of absorbent cotton. This treatment is very useful in those cases where a discharge from the middle ear has produced irritation. In dry eczema in this region we may also use the mild bichloride wash, and follow it by an ointment composed of,—

℞ Iodol.....gr. xv.
Lanolin.....ʒi.

If the disease involves the external auditory canal, the desquamating epithelium should be removed by some absorbent wool twisted upon an applicator, and the canal anointed by,—

℞ Iodol.....gr. xv.
Paraffin oil.....ʒi.

The introduction of a tampon of wool will do much towards the keeping of the liquid in the canal. This dressing should be renewed night and morning. Often a cure results in a very few days.—*Therapeutic Gazette.*

Guaiacol as an Antipyretic.

Friedenwald and Hayden report a series of cases in which they have used guaiacol for this purpose. They think they are justified in concluding:

1. That this drug has a powerful antipyretic action, occasioning a reduction of from one to four degrees of temperature in from one to four hours.
2. That in all cases this reduction of temperature is accompanied by profuse diaphoresis, which may or may not be accompanied by a chill or chilly sensation.
3. That great exhaustion is frequently produced.
4. That the effects may be obtained from comparatively small doses (from 30 to 50 drops), and that great care should, therefore, be exercised in the use of the drug. The drug should be applied but once or twice daily, and the initial dose should not be above 30 drops.
5. That the effect produced by guaiacol, though more powerful, is the same as it obtained from most of the other antipyretics of the coal-tar series, and that the same care must, therefore, be exercised as with the other preparations. Its effect differs widely from the stimulating cold bath in being depressant.
6. That the main indication for its use is in diseases accompanied by high fever in which the cold bath cannot be applied. It may, therefore, be especially useful in typhoid fever as well as in all other diseases accompanied by high fever in which irritability of the stomach prevents the use of other antipyretics.—*Therapeutic Gazette.*

The Death Test.

Chas. Bouchard declares a certain, simple, and easily applied means of recognizing the presence of death is to ascertain the temperature in the axilla; if this falls below 68° F. it is an undubitable sign that life is extinct.—*Med. Age.*

The Germicidal Action of Gallanol.

A recent number of the *Lyon Medical* contains the report of a series of exhaustive experiments by MM. P. Cazeneuve, Rollet and Nicolas, to ascertain the germicidal value of gallanol. The action of the drug was tested on five microbes—that of anthrax, the staphylococcus aureus, the bacillus pyocaneus, the Eberth germ, and the bacilli coli communis. The experimenters arrived at the conclusions that gallanol in excess completely destroyed the vitality of the micro-organisms, that in a relatively weak solution their development was diminished, and that in an attenuated solution, while their growth was not materially affected, their pathogenic powers were destroyed. It was shown that the drug was an invaluable remedy in the vegetable parasitic diseases; while destructive to the micro-organisms, it was perfectly non-toxic to the general system. Gallanol possessed such active germicidal properties that there was no doubt that it could be employed with great benefit in the infectious diseases as an abortive remedy.—*N. Y. Med. Journal.*

Senile Forms of Multiple Neuritis.

Oppenheim (*Berliner klin. Wochenschrift,*) reports six cases of multiple neuritis in persons between seventy and eighty-two years of age. There was a gradual impairment of motion and sensibility of the extremities. They all had a high grade arterial sclerosis. On the fingers and toes there is paresthesia, with paralysis of the interossii and atrophy of the peroneii. Over the nerve-trunks there was slight tenderness, no pain. There was no disturbance of the reflexes. The cerebral nerves were also intact. There was slight anesthesia. Two of the cases improved markedly, a third slightly, one became worse, and the other two remained stationary. This form of neuritis is distinguished from others by the absence of any toxic or infectious cause; its chronic cause, the slight diminution of sensibility, and mild paralysis, and the freedom of the cerebral nerves. The cause is probably a process which partakes largely of the nature of arterial sclerosis. The therapy is wet packs, galvanism, rest, and full diet.—*University Med. Magazine.*

Treatment of Vomiting of Pregnancy.

Lutaud (*Revue Obstetricale et Gynecologique*, February, 1894) states that vomiting of pregnancy is best treated by cocaine. The action of this drug is often strengthed by combining it with antipyrin. Thus the following prescription:

℞ Chlorohydrate of cocaine.....gr. iss.
Antipyrin.....gr. xvi.
Distilled water.....℥iv.
Sig.—One teaspoonful every half-hour until vomiting ceases.

If the stomach will not tolerate this quantity of liquid, ten drops of a one and a half or two per cent. solution of cocaine are administered, repeated at one or two hour intervals.

At times the application of cocaine to the os is extremely valuable.

The following prescription may be used:

℞ Hydrochlorate of cocaine.....gr. xvi.
Extract of belladonna.....gr. iv.
Vaseline.....℥ss.

Cotin's method of dilating the os with the finger sometimes causes immediate cessation of vomiting. Occasional success will follow Routh's procedure, which consists in exposing the uterine neck by means of a speculum and painting with tincture of iodine. In cases of moderate severity, the following mixture will be found serviceable:

℞ Tincture of iodine.....℥ii.
Chloroform.....℥ii.
Sig.—Five drops night and morning at meal times, taken in Seltzer water.—*Therapeutic Gazette.*

The Treatment of Varicose External Hemorrhoids.

When uncomplicated these hemorrhoids never require an operation. The patient's bowels should be carefully regulated; he should avoid prolonged sitting at stool. After each operation and at bedtime he should lie down upon his side and apply firmly to the parts a sponge frequently dipped in ice water. After this he should apply an astringent ointment spread upon a piece of soft lint, and retain it in position throughout the night. I have found no ointment better than the following.

℞ Ung. belladon.,
" stramonii,
" ac. tannici, } .....āā ℥j. M.

Under this treatment they will disappear and the patient's anus become as well as ever.

If from any complication, such as fissure or some other variety of piles, an operation should be necessary, these varicose hemorrhoids may be operated upon at the same time by excising the more prominent portions of the varicosities either by scissors, crushing or the clamp and cautery. The latter method is quite painful in these cases, owing to the involvement of the cutaneous tissue. I have frequently cured this variety of piles by making cross sections of the ring of veins at several points with the Paquelin knife heated to a dull red heat; the subsequent pain, however, is a serious objection to this method. The operation by crushing is much less painful and equally effectual. I have not tried puncturing the tumors with a fine-pointed Paquelin tip, as advised by Dr. Kelsey, having heard of several cases of abscesses produced by this method.—J. P. Tuttle, M. D., in *N. Y. Medical Journal.*

The Early Diagnosis of Cancer of the Cervix Uteri.

The *British Medical Journal* for May 12th gives a report of an address delivered before the Southeastern Branch of the British Medical Association by Dr. Ernest Herman, of London, in which he says that the early diagnosis of uterine cancer is important, as secondary growths occur later and more seldom with cancer of the uterus than of any other part of the body, and, if it is removed, there is a better prospect of freedom from recurrence than in any other form of the disease. Modern improvements, he says, have made it possibly to remove cancer of any part of the uterus, so long as it is limited to this organ, with little risk, but to be successful it must be limited to the uterus. Cancer of the vaginal portion begins in a part that can be felt and seen, and it can be diagnosticated earlier than any other form, and therefore ought to be more successfully treated; cancer of the cervix spreads more rapidly beyond the uterus than the other form, and is less amenable to treatment. This disease occurs chiefly toward the end of the child-bearing period, but it has been seen in childhood and in extreme old age, and therefore the patient's age should not influence the diagnosis in the least. A tendency to cancer is sometimes hereditary, but this should not have the slightest weight, as only a very small proportion of patients inherit the disease.

The first symptoms of cancer are usually hemorrhage and leucorrhœa; pain and wasting come later. The early diagnosis is so important, says Dr. Herman, that any unusual hemorrhage or discharge in a woman who has had children is a reason for vaginal examination, for it may be the first symptom of cancer, and the nature of this disease cannot be determined without local examination. In considering the local signs, the features which distinguish cancer in any part of the body must be taken into consideration.

When cancer begins as an outgrowth from the surface it may look like a growth of warts, or papillæ, or granulations on the vaginal portion, and the surface feels uneven or even rough. It may begin also as an ingrowth beneath the surface. It can be detected by an angry, livid red spot the surface of which is at first quite smooth. This angry color depends upon the vascularity caused by the new growth and upon its tendency to break down, which leads to minute hemorrhages into the growth before the breaking down is extensive enough to make a breach of the surface. The livid surface of a cancer spot bleeds on being rubbed, so that a smooth, dark red spot, bleeding on contact, is very suspicious. This is the earliest stage of cancer, and if there is a nodule that can be felt, the suspicion is still stronger. If the cancer has so advanced as to form a growth like a mushroom or a cauliflower, the diagnosis can scarcely be doubtful.

With regard to microscopical diagnosis, Dr. Herman thinks that the value of the microscope has been overestimated, and that to rely upon its use may lead to many mistakes. It may now and then, he says reveal cancer in a doubtful case, but negative microscopical evidence should never be trusted.

Treatment of Diabetes.

In the *Indian Medical Gazette* for March, 1894, Fermie writes that in treating diabetes it ought to be borne in mind that a dietetic treatment of an appropriate kind is most important, more especially in middle-aged people, and this bears out the rule of Prout, who laid it down long ago that "diet is the first and chief point to be attended to."

The diet ought to be so regulated as to prevent sugar being formed from the food, so that all sugar-forming food must be prohibited. This prohibition should be gradual and not abrupt. Its place, however, must be supplemented by assimilable oil or fat food, such as cream, cod-liver oil, butter, cheese, fat bacon, ham and meat to any quantity, except liver.

Too much milk should not be allowed, nor should pastry, potatoes, beet-root, puddings, and farinaceous substances be allowed at all. The highly-advertised diabetic foods, if really prepared, as stated, without starch, will be very beneficial, and will supply a want long felt in filling up the gaps made by the prohibition of articles of food which long use has made almost indispensable, and renders the patient less discontented with the task set before him and more amenable to treatment. The gluten and almond biscuits prepared for the victims of diabetes are so pleasant to the taste that invalids require no encouragement to use them. Diabetic food may also be sweetened with saccharin tabloids.

It is necessary to regulate the drink as well as the food of diabetic patients. Water should only be drunk in moderation, while chocolate, sweet ales, cider, and all sweet and sparkling wines should be forbidden; in fact, it is inadvisable to take alcohol in any form.

So far as drug treatment goes, there is none which may be termed consistently satisfactory. Codeine certainly, in combination with a strict diet, has a beneficial result. It may be given in ¼- or ½-grain doses three times a day at first, then less frequently. Dr. Mitchell Bruce thinks that opium or its derivatives should not be used until the full effect of a strict diet has been tried; but clinical experience goes to show that codeine can and ought to be given coincident with a strict diet; one acts as an adjuvant of the other and hastens the process of cure. Professor Fraser thinks that morphine is more effective in some cases than codeine.

Salicylate of sodium is regarded with favor by some, especially in those cases where opium is contraindicated.

In treating diabetic coma, early and thoroughly purging with a large dose of calomel is about the best, followed by stimulents and doses of potass. acetas with digitalis every hour at first and then less frequently.—*Therapeutic Gazette.*

For Diphtheria.

℞ Caffeinae..... gr. xx
Sodii bicarb..... gr. v
Aquae, q. s. ad..... ℥ij
M. Sig.—Apply locally as a spray to the membrane.

Sulfonal Poisoning.

Stern discusses the renal lesions in this condition. An insane woman aged 70 received 1 gramme sulfonal every evening, the dose having to be doubled in a month's time. This was continued for more than three months, with frequent intermissions amounting often to eight days. When the total amount taken was some 150 g. the urine showed a dark color due to hematoporphyrin. The drug was omitted at once. Fatal coma, however, supervened in a week's time. The kidneys were of a pale red color, with smooth surface, and contained deposits of lime salts. These changes were such as might be attributed to advanced age, but the microscope displayed a very extensive necrosis of epithelium, and also minute hemorrhages. These minute changes represent a toxic nephritis, and were unquestionably due to the sulphonal. There was a large gall stone in the gall bladder, and small friable concretions in the scarred cystic duct. Very slight jaundice was present during life. The poisoning occured here, as in other published cases, in a woman, and after the prolonged use of the drug. The obstinate constipation, the age of the patient and the changes found in the myocardium no doubt accelerated the result. During the use of sulphonal the urine should be carefully examined for albumen or formed elements, as when once hematoporphyrin-uria appears the prognosis is unfavorable. In the presence of renal disease the prolonged use of sulphonal should be resorted to with great caution.—*Brit. Med. Journal.*

Epileptic Seizures Suspended.

Larrabee (*Southern Med. Rec.*) calls attention to the frequent suspension of seizures for considerable periods under certain mental influences. He mentions the case of a famous church spire painter, who worked in Louisville, who was an epileptic, and yet could be seen any day suspended upon his airy platform one hundred and fifty feet above the ground. He never had a spell while aloft pursuing his work, but once back upon *terra firma* he would be seized with a fit. So marked in this feature that treatment by a new physician, especially if he be a celebrity, often secures a long immunity from the seizures. The knowledge of this fact should caution us against the belief in the full effectiveness of our therapeutic measures.

SURGERY.

A Word to the Busy Doctors Regarding Hemorrhoids.

In complaints of rectal troubles, make diagnosis before you prescribe If piles, discover what kind, whether external or internal, bleeding or not bleeding, protruding or not protruding. External, inflamed piles require, in a degree, the same treatment as internal, yet the external require an astringent which internal cannot bear. Bleeding piles need different treatment from those that do not bleed, and protruding piles special treatment, especially if they resist reduction. External piles are of two varieties: 1, External tags of skin; 2, venous tumors. External tags of skin, when inflamed, constitute one of the most painful varieties of piles. An ordinary prescription can do but little good. Ointments cannot be absorbed. The application of heat or cold is productive of more positive results; use flaxseed poultices or cloths wrung out of hot water and changed often. If heat is unpleasant to the part, apply very cold water in the same way. If an instringent is necessary, make solution of sugar lead, bowels should be moved daily, salines as good as any. An injection of a quart of cold water will afford some relief. A radical cure consists in the removal of the tumor. Never try to push tumor inside of the rectum. The treatment of internal piles is different from the class just cited. The danger from this class is hemorrhage or strangution; either may endanger life. An indiscriminate prescription of an ointment accomplishes nothing. Far better is an application of cold water, when not protruded, an injection of cold water when not protruded but painful, gives more comfort than all the combination of ointments usually prescribed. If, when the person who is troubled with the protrusion of internal piles is directed to take a cold water injection every morning, to move the bowels, to bathe the pile tumor in cold water after an evacuation, annoint the mass with plain vaseline, then push it back, and under no circumstances to use paper as a detergent, much comfort will be gotten out of these directions. If internal piles both bleed and intrude, a little different treatment is used

The hemorrhage must be looked to; when protruding an examination can be made, and if no bleeding points are found the following will be found good:

℞
Vaseline ..... oz. j.
Acetate lead ..... gr. xx.
Pulv. opii ..... gr. xv.
Balsam Peru ..... dr. j.

M. et. Sig.: Apply to pile after washing with cold water.

If protruding external piles are accompanied with much pain, some complication exists, usually ulceration. Washing with hot water will be found more agreeable, to be followed by the following prescription, which contributes much to relief:

℞
Cocaine ..... gr. vij.
Ex. opii ..... gr. xx.
Ext. belladonnæ ..... gr. xvj.
Lanoline ..... oz. j.

M. et Sig.: Apply after washing. Then return mass.

At bedtime use the following suppository:

℞
Iodoform ..... gr. iv.
Morph. sulph ..... gr. ½

M. Ft. sup. No. i. Sig.: Insert at bedtime.

Itching is often mistaken for piles; if itching is a most prominent symptom, it will most likely be found to be pruritis. If with piles we have an itching of the surrounding parts, the following is suggested:

℞
Vaseline ..... oz. j.
Ichthyol ..... dr. j.

M. Sig.: Apply often.

—*Matthew's Medical Quarterly.*

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ORIGINAL ARTICLES.

CONTRIBUTIONS TO OBSTETRICS AND DISEASES OF WOMEN.

[NUMBER THREE].

THEOPHILUS PARVIN, M. D.

CHILLS FOLLOWING UTERINE INJECTIONS.

Mrs. R., twenty-nine years old, was delivered of her second child after a normal labor, on April 14th. Her condition continued favorable until the afternoon of the 16th, when there was slight fever and there was also some tenderness over the left iliac region. The fever increased and the next day was so great and, having associated with it a sense of depression and mental confusion, some alarm was felt, and the physician in charge, from whose notes I have taken the preceding facts, and shall take others, had me visit the patient, some twenty miles from the city.

I found she had an offensive lochial flow, a pulse of about 100, and a temperature of nearly 103°. Believing the essential indication was to thoroughly wash out the uterus, I did so, employing for this purpose a fountain syringe and a warm mixture of creolin and water. The irrigation was made without the patient suffering pain, scarcely discomfort. She had been placed across the bed, her feet resting on chairs, for the operation. Thirty minutes after being replaced in her usual position, she had a severe chill lasting ten to fifteen minutes, and her temperature rose to 104°. I ought to state that in the fluid coming from the uterus during the irrigation there was a small fragment of the membranes, and also apparently a piece of placental tissue as large as half a small marble. The fever subsided somewhat on the morning of the 18th, but as the lochial discharge still continued to be somewhat offensive, upon visiting her in the afternoon I believed a second irrigation indicated, and accordingly it was given. This too, was followed by a more violent chill and the temperature soon rose to 105°; but the decline of the temperature was earlier and more decided than after the previous operation. On the 20th, I found her with a high temperature, considerable prostration and the lochia not yet entirely normal as to odor. It seemed to me that there must still be in the uterus some infecting material, and I determined to use the curette, employing therewith corrosive sublimate in the creolin mixture. I found in the discharge that occurred from the washing a partially decomposed clot probably the size of a small marble. Again the treatment was followed by a still more violent chill, and the temperature went above 105°. The fever continued, the temperature varying from 100° to 105° until the 21st, when it almost entirely disappeared. It returned, however, at night and continued through the 22nd; in the evening of that day another chill came during a profuse perspiration following the application of twenty minims of guiacol over the abdomen; the temperature during the chill reached 107°, lowering very soon after the cessation of the chill. The fever continued each morning on the 23d and 24th,

when it disappeared for twenty-four hours; but it returned the 26th, and continued during that and the next day; the temperature, however, was not high, when it entirely disappeared and uninterrupted and complete convalescence began.

REMARKS.

First, a word in regard to the unnecessary use of intra-uterine as an adjective for injections of the uterus. Uterine is sufficient without the awkward prefix; we never think of saying intra-vaginal injections, and yet the term would be equally appropriate with the former.

Next, here was a case of puerperal infection when all requisite antiseptic precautions had been taken by a wise and experienced practitioner; and such cases will occur again, so let us not be in haste to condemn the obstetrician who meets with such accident, notwithstanding all proper precautions.

But the essential point in the history, the sole reason for here presenting it, is the fact that the uterine injection was followed in each case by a chill. This was my first experience of the kind, though I have in many cases made use of such injections.

According to Silvestre, *Les injections intra-uterine, et les accidents provoquès par leur emploi én obstètrique*, 1892, states that generally the chill occurs during the first hour following the irrigation; 20, 30 and 45 minutes represent the intervals usually noticed—in one case the interval was an hour and three-quarters. The decline in the temperature and that in the frequency of the pulse usually take place in 4 to 6 hours, and these diminutions are never delayed more than half a day. According to this author too, the chill is independent of the fluid injected; it has occurred after the use of carbolic acid, corrosive sublimate, thymol chloral. A chill has followed a prophylactic injection.

Therefore the hypothesis asserted by Sylvestre, that the chill is caused by uterine contractions, excited by the injection, determining the entrance of septic products in the uterine blood and lymph-vesseis into the general circulation, is scarcely tenable in view of the fact last stated.

Kaltenbach has briefly referred to this accident, stating that the cause is not at [illegible]ear, but suggests, in addition to entrance of septic stuff into the blood vessels, the possible entrance of some of the injected fluid, and also the destruction of blood corpuscles. He further states that usually the chill has no unfavorable significance.

Can we prevent the chill? It has been suggested that the reservoir of the fluid irrigating the uterus should be held only a few inches higher than the patient's hips. It is hardly necessary to insist upon the importance of having a free exit for the fluid from the uterus. I have generally employed the catheter of Bozeman as modified by Fritsch; but there are several other instruments equally good, some of them possibly better, and among these may be mentioned that of Doléris, which I have occasionally employed.

There is possibly a special lesson to be learned from the chills in this case. It will be remembered that one of these occurred, though no injection immediately preceded it; it followed a profuse perspiration caused by the application of guiacol. May not all of these chills stand for a particular type of constitution? Are they not the expression of some peculiarity of organization, an intrinsic susceptibility to the action of certain agents or influences? We may call them then, for a want of a better name, nervous chills, and make them, including the elevation of temperature, as has previously been suggested, analogous to similar phenomena occasionally occurring after the use of the catheter or sound. But it is doubtful whether any explanation will prove entirely satisfactory.

Relation of Bacteria to Colds.

A Prof. Schenck, according to the London *Globe*, has recently discovered that what is commonly called a cold is due to bacteria. His theory is that when a person enters a cold room, the bacteria flock to his warm body, and find entrance through the open pores of the skin. We are surprised to find a paragraph going the round of the medical journals, calling attention to this remarkable discovery. The idea that bacteria are possessed of volitionary power and capable of pouncing down upon the body like a flock of vultures to seek out the so-called pores of the skin like weasels, is too monstrous for credence by any one who has the slightest knowledge of medicine.—*Modern Medican.*

EXOPHTHALMIC GOITER.*

W. W. HILL, M. D., Weston, O.

This is a disease of unknown origin, and is characterized by exophthalmos, enlargement of the thyroid gland and functional disturbance of the vascular system.

The etiology is known to you, and I will simply say that it is rare in men. It usually occurs between the age of twenty and thirty, although it is sometimes seen in young girls about puberty. It is sometimes seen in several members of the same family. I will also note a few of the causes of the disease, such as worry, fright and depressing emotions, precede the development of the disease in a number of cases.

In the morbid anatomy no constant changes have been found in exophthalmic goiter. Special attention has been paid to the condition of the sympathetic system, as the rapid action of the heart and dilatation of the vessels have been attributed to paralysis of the sympathetic fibers, particularly the vaso-dilators. This view has found many supporters, but neither in the ganglia nor in the nerves are there any changes which can be regarded as constant and peculiar. On the other hand, many features of the disease are explicable on the ground that it is an affection of the medulla oblongata. Dr. Hale reports a case dying of an acute intercurrent disease, in which there was hemorrhage in the floor of the fourth ventricle. I think the vascular and nervous features must be due to a lesion of this kind, but it is difficult on any theory to explain all the symptoms of the disease and to bring into line the mental and vascular phenomena, the exophthalmos and the goiter.

The symptoms vary in different individuals. The acute and chronic forms may be recognized. In the acute form the disease may develop very rapidly; when the patient is suddenly seized, we sometimes have intense vomiting and occasionally diarrhoea, always rapid action of the heart and throbbing of the arteries. In most all cases we have prominence of the eyes, the thyroid gland enlarged and usually soft.

The characteristic symptoms vary a good deal in their onset. The cardiac and vascular symptoms are usually first to develop, and the patient complains of palpitation and shortness of breath, and on examination we find the pulse increased in force, the carotids throb. In long standing cases the heart may be hypertrophied and the sounds very intense. Exophthalmos usually follows the vascular disturbance. It is readily recognized by the protrusion of the eyeballs and, partly from the fact that the lids do not cover the sclerotics, the protrusion may become very great and the eye protrude from the socket, or it may be barely perceptible. The enlargement of the thyroid usually developes with the exophthalmos. It may be general or only in one lobe, and is rarely as large as an ordinary goiter. Tumor is present in some cases, involving the hands mostly.

The prognosis is unfavorable, or my cases were as I have only been called to treat two and they both died. Before I say anything about the treatment I will give you the conditions I found in a girl fourteen years and seven months old.

On December 20th, 1893, Miss A. V. T., was brought to my office. She complained of pain in her head; she was anæmic and nervous. Temperature normal; pulse beat 100, and there was a throbbing of all the arteries. At this time there was no perceptible enlargement of the thyroid gland. Family history was good so far as I could learn. No hereditary disease on either side of the family. At this interview I learned the girl had menstruated at the age of 13 years, and had always been regular until December 1st, 1893, when she had taken cold by getting her feet wet while at school and did not menstruate. At this time I prescribed tincture of strophanthus to lower the pulse rate. I also gave her iron and quinine to build up the constitution. I directed her to report in ten days, but I did not see her again until January 15th, 1894, when I found the temperature normal and the pulse 96, and she was very nervous. I again prescribed quinine and iron, also tincture of strophanthus, and asked to see her within

*Read before the Northwestern Ohio Medical Association, June, 1894.

the next ten days. I did not see her again until March 22nd, 1894, when I was summoned to her bedside and found her in convulsions, pulse rate 160, and all the arteries throbbing, eye balls protruding so that the lids did not cover the sclerotics. This was the first time that I noticed any enlargement of the thyroid gland; this was a little more marked on the right side. I learned at this time that she had been better and had attended school about a month, that on the 20th of March she had been very badly frightened, and that she ran home a distance of about forty rods and fell onto the floor on opening the door and began to complain right away. I at once told the parents that she could not recover, and that if they wanted counsel to send at once. This was about four o'clock A. M., and at 8 o'clock A. M. Drs. Schooly and Cook arrived. We gave bromide, chloral, chloroform and morphia, but nothing would relieve the spasms, and she died March 22nd, 1894, at 8.30 P. M.

We were not permitted to hold an autopsy and cannot give the condition of the brain, cord and internal organs.

COMMUNICATIONS.

CHRISTIAN SCIENCE AND ITS RELATION TO THE MEDICAL PROFESSION.*

HILDEGARDE H. LONGSDORF, A.M., M.D., CARLISLE, PA.

In appearing before you on this occasion I feel it due myself, as well as this learned assembly, to offer a partial explanation of my purpose, in so doing. For otherwise it would certainly savor on my part of the arrogance of conceit, or an unwarrantable assumption of privilege, to attempt to address on a medical subject, such an august company of veterans and superiors in an art where at most I can only be a tyro.

The papers read here are presupposed to come from those whose skill and knowledge have brought honor and repute to their names and value to their slightest utterance on such topics as habitually arise on occasions like this. Far be it from me to invade such a field, only to illustrate by my temerity the time-worn maxim that "fools rush in where angels fear to tread."

But while the primary object of our meeting is mutual discussion of the more immediately important medical subjects, and instruction from those who are so well able to give it, there are also closely allied and leading up to these, many subjects in the line of suggestion and inquiry which may pardonably be taken by the less gifted.

The subject therefore, which I shall briefly consider here is one of these, not a purely medical subject from this standpoint, but rather one of those related subjects. which, though at first glance insignificant and even contemptible, yet from the proneness of the uninformed to exaggerate and mystify diseases and all remedial agencies—carry with them an overpowering influence, and to the younger practitioner especially, are baffling and vexatious.

Such is Christian Science, probably the most pretentious and certainly the most successful of the out-growths of our modern high pressure civilization; which not content with its acknowledged empire over material nature, and subsidizing the results of scientific investigation, must needs enter the realm of psychological phenomena, and skilfully weaving therefrom a tissue of fact and fancy, spread it before the gaze of a too credulous public, call upon it to believe what it cannot explain, and revere what it cannot comprehend.

There have been many such mock systems in former, as in later years, most of them having for a basis the "divine art of healing," along with other pretentions to a spiritual or philosophical status, all wearing a more or less familiar guise to the reader of history. Christian Science, however, goes a step beyond any of its forerunners, is one shade finer, and more plausible in its theory, and more conspicu-

*Read before the Medical Society of the State of Pennsylvania, 1894.

ously successful than any similar intellectual epidemic the world has ever witnessed. It seems to unite and intensify into some semblence of symmetry, something of the astrology and prophetic hallucination of the ancients; something of the religious ecstacy and mysticism of the middle ages; something of the progressive thought of the later school of the English scientists, and welding them together by the despotic power of that prescient imagination which overleaping the bounds of demonstrable truth, presents the result to the conservative thinker of to-day, as a reasonable doctrine, no less a universal panacea for "all the ills that flesh is heir to." These fatuous misbeliefs are the intellectual scandal of our age, and while we must desire to apply some corrective influence, it becomes a puzzling question how to regard those who honestly believe in them and what should be the attitude of the physician toward such as aspire, under its provisions to the office of "healers."

In more accurately defining christian science, I would observe, that it must not be confounded with hypnotism, animal magnetism, faith or mind cure, spiritualism, clairvoyant or other trance, or the old-time powwowing processes which the practitioner in country districts still frequently encounters. All of these it somewhat resembles, having apparently some family features of all, yet differing in essential particulars. Christian science pure and proper, disclaims or ignores these agencies and claims a Heaven-derived power of its own; and in this probably lies its greatest influence—for in all times a "divine right" stoutly asserted and skilfully maintained, has held its own against reason, logic and the evidence of the unprejudiced senses. There is no instinct so universal as that which responds to the intimations of the supernatural, and the most realistic among us must acknowledge this influence as a factor in certain diseases. We see it exemplified in the history of the earliest nations, and there we attribute to ignorance, but the candid student must admit that the advanced intelligence of the later periods has changed the form, but not eradicated the inherent tendency.

To the primitive man death and disease appeared the immediate act of some invisible, but all-powerful being, who from malice or rage or other human passion, dealt out dire punishment upon mortals. Hence his favor was sought and propitiatory rites and ceremonies were observed to avert disaster and suffering. But this is not to be wondered at. The ignorance of the ancients as to the true character and real origin of disease appropriately correspond with their ignorance of the constancy of the phenomena of the external world. Subsequently, while the more cultivated and advanced nations were passing through the throes of a mighty religious revolution and the dismemberment of social structures was everywhere imminent, a further development of this natural attitude of man toward a Creator and the universe took place, and a thousand abnormal manifestations of mind over matter were attested, until a mystical system —partly real and partly fanciful was evovled. Under this system many delusions were experienced, by such as might be called honest believers, while jugglers and magicians in all fields, but especially so in those allied to the curing of disease, were rife.

Following the renaissance of art and literature, knowledge grew, and it may be that with a more general diffusion of the underlying principles of medical science, such as the uneducated mind can grasp, and a clearer apprehension of the import of recent discoveries in bacteriology and similar fields of investigation, the demonstrations which are now so constantly made to lead the masses back to the twilight ages, in this respect, will cease. But until this more general intelligence shall come to pass, we will doubtless continue to witness the phenomena of the blind gaining instant sight, the lame being made to walk, and the suppurating sore healed by a word; such alleged cures being regular occurrences in the vicinity of a properly qualified christian scientist. From these centers of abnormal experiences, ever widening influences diverge, and we shortly see vast numbers of enlightened and cultivated persons of both sexes and of every shade of religious belief, accepting and propagating the ideas that form the basis of the popular manifestation.

Christian science shrewdly appreciates the value of this prevailing tendency of human nature, and therefore, as its name imports, it is found to be a compound of

theology and *the art of healing*—in these two sides expressing the strongest wants of mankind. Otherwise it calls itself the "Science of Health," and an elaborate treatise has been given to the public for the purpose of explaining its peculiar doctrines or principles, and setting forth the benefits which must accrue from its universal acceptance.

It was *discovered*, as its adherents put it, in the year 1866 by Rev. Mary Baker G. Eddy, of Lynn, Mass. In giving an account of her discovery and preliminary experience, Mrs. Eddy says that she was impelled from childhood "to seek diligently after God as the one great ever present remedy for all human woe." She states that the physical side of this research was aided by hints from homeopathy, to the conclusion that *mortal belief*, instead of the drug, governs the action of material medicine. She found in the remedies enumerated by Jahr that the prevading secret was that "the *less* material medicine we have the better the work is done," and she proceeds to prove that this is so by an illustration from this school of practice. "One drop of the thirtieth attenuation of Natrum muriaticum in a tumblerfull of water and one teaspoonful of water mixed with the faith of ages would cure patients not affected by a larger dose." The drug disappears in the higher attenuations of homeopathy, and *matter* is thereby reduced to the proportion of mortal mind, but the curative principle remains and is found to be even *more* active.

She also relates her own experience, while in failing health, with a distinguished mesmerist. His method of treating her was by *manipulation* and water, and although she acknowledges that he had advanced views along his own line of research, she pronounced "mind cure on a mental basis" a kingdom divided against itself.

In a similar manner she argues against the efficacy of animal magnetism. It is interesting to note the elimination of her own peculiar idea from the prevailing influences of the times and her final success in reaching a standpoint *differing* from all her predecessors and thus gaining *originality* and *potency* for her cause. It must be confessed that there is something beautiful and attractive in the ideas thus expressed, and the most fastidious among us could take no exception (on the ground of ethical mortality) to the tenor of her sentiments.

In her conclusions the odium of hypnotic experimentation is eschewed; the ridicule attaching to clairvoyant and other mediumistic practices is avoided. She demonstrates in fact, the spiritual attenuation of a noble idea, more subtle and dilute than any homeopathy ever propounded; a methaphysical abstraction more elusive and begiling than any hypothetical figment portrayed in the pages of German philosophies; while there lingers about her doctrine a classic flavor not unworthy the noble parentage of Plato, who first taught the theory of Ideas or Essential Forms.

Each one of these was at once the prototype and the cause of a number of transitory existences in the sphere of the sensible. To these ideas, as to higher realities, phenomena were referred, and their explanation found in them by Platonism. Following along this line of suggestion, which every classic student has conned, we perceive that modern christian science is a restatement of an ancient principle, which has lived in and influenced metaphysical speculation in all ages.

Mrs. Eddy tabulates her theory on the understood dominance of supernatural *dread* or *fear* in most people, and at the same time skilfully evades direct issue with superstitious antagonisms, by calling *fear* another name for disease. She declares that "war is waged between the evidences of spirit and the evidences of the five physical senses." "Divine science was against *sin, sickness* and *death*." And again, "All sensation is *mind* and mind is *God*," and further "The notion of more than *one* mind is unsatisfying and unscientific." Her deduction, therefore, is that *mind* is synonymous with *Good* or *God* and per consequence. All else is *material* and not to be considered.

Thus she directs the following formula. "Science saith, to all manner of disease, know that God is all-powerful and ever-present, and the sick are healed." Other statements embodying this *science*, so-called, are made in the extraordinary book called "Science and Health," which is in a sense the Pharmacopeia of the new school, but it is on the basis of the foregoing that their practice is built up.

The patient is taught that sickness is a

belief, a *latent fear* made manifest on the body in different forms of disease. "This *fear* is formed *unconsciously* in the silent thought, as when you waken from sleep and feel ill, experiencing the *effect* of a fear, whose existence you do not realize." But if you "fall asleep conscious of the Truth of Science, viz., that man's *harmony* is no more to be invaded than the rythm of the Universe, you cannot awake in fear or suffering of any sort." Thus christian science aims at the highest medical ideal, the prevention, as well as the cure of disease. That *matter* cannot suffer was illustrated in a very simple manner by a very intelligent lady, a friend of mine, who while on a visit to the West, was lead to investigate, and finally become a convert to christian science. She said with much apparent conviction, "why if you would cut off your hand and throw it on the floor, it couldn't feel." "It is only your mind which is *spirit* that feels and *spirit* which is *God* cannot be diseased or suffer." So the whole belief in disease is *unreal*, a fantasy, the result of erroneous teaching, or latent fear, or sin.

This, then, is the whole doctrine. Comprised in these somewhat enigmatical and contradictory statements, is the motive power of a system which has more strength than most of us would be willing to believe. If it were not for this fact, that it is rapidly spreading, gaining friends and influence among the most intelligent classes, we might well dismiss the subject with a smile; as one more of the numerous phases in which the ever-restless mind, ever recurring to the unknown, ever tracing its circling course upon itself, seeking to find the cause from the phenomenon, has manifested itself.

But it has a vast and increasing power and not only among the uneducated. It has its representative literary journals, a system of propogating its tenets by phamphlets and tracts and books. It has an array of special agents or missionaries, a respectable showing of institutions or metaphysical colleges, extending over many of the different States, and a vast number of private establishments for the cure of every disease under the sun. Preaching and teaching come into the plan and to a thoughtful observer it seems as if the dark ages, when demonology and magic ruled the court, the camp and academic grove, were about to return.

It is, as we have seen, an old acquaintance with a new face, and its extraordinary progress has doubtless been due to the reactionary tendancy of the times among a large class of orthodox people, from the scientific materialism, naturally growing out of the demonstrations going on here and abroad, as to the cause and prevention of disease.

The question arises how we are to regard it and how we are to be armed against its inroads. If mental force has a therapeutic value, if the mind can control not only the kingdom which of right belongs to it, but also the laws of matter and of physical sense, then it seems as if our resources were inadequate, and some form of definite action should be taken whereby we could cope successfully and with dignity, with what must otherwise be a dangerous foe.

It would be out of place to argue against the possibility of mental cures. Thousands of such instances are upon authentic record and it would be idle to deny the power of the mind over the body. There is no question that certain diseases have been cured by believers in faith cure, in prayer cure, in every phrase of this theory that can be imagined. There is such a healer near my home, who has hundreds of patients, from near and from far they come, and I do not doubt that some are cured, and to a rational thinker there is no mystery about the process, but the fact remains that the process cannot be rationally explained, so that the subjects of it can clearly understand it. Consequently in endeavoring to maintain our professional self-respect, we are in danger of actually becoming illiberal, narrow-minded and dogmatic.

The importance of some definite restraining force for these abuses can scarcely be overestimated, and if public opinion and the advanced philosophical science of our era have been powerless to effect this, it would seem to come into the province of legislative enactment.

Excoriations in Children.

Dr. Crondall (*Revista de Ciencias Medicas de Barcelona*, No. 7, 1894) advises the following powder:

Salicylic acid	(grs. viij)	0.5
Subnitrate bismuth	(℥ij)	8.0
Starch	(℥iss)	6.0
Ointment roses	(℥j)	30.0

—*Pritchard.*

CONTRIBUTION TO THE SURGERY OF THE GALL-BLADDER, WITH REPORT OF THREE CASES OF CHOLECYSTOTOMY AND ONE CASE OF CHOLECYSTENTEROSTOMY.*

X. O. WERDER, M. D., PITTSBURG, PA.

There are practically only two operations to be considered for the relief of cholelithiasis, the most common affection of the gall-bladder requiring surgical interference, namely, cholecystotomy with suture of the edges of the gall-bladder to the abdominal wound and cholecystenterostomy. Cholecystectomy, on account of the greater mortality attending it as compared with these two other operations, is, in my opinion, only applicable in malignant disease of the gall-bladder, or when this viscus has become so contracted as to make either of the two operations technically difficult or impossible. Cholecystotomy, with complete closure of the incision and return of the gall-bladder into the peritoneal cavity, still advocated by some operators, and called "ideal cholecystotomy" is equally objectionable for the same reason of greater mortality.

Generally speaking, the technique of both operations, cholecystotomy and cholecystenterostomy has been so much improved and the results of either proven so satisfactory, that a kind of rivalry has arisen between them; and since the introduction of the "Murphy Button" it almost seems as if the latter was destined to supersede the former. The principal reason of this is the fact that cholecystotomy is not infrequently followed by a permanent, or at least, a long persisting fistulous opening between the gall-bladder and abdominal wound, accompanied by a more or less constant stream of bile pouring over the abdomen, which is not only a source of annoyance to the patient on account of the inevitable soiling of the clothing and by giving rise to eczematous eruptions and dermatitis, but it may, when the greater portion of the bile is turned out of the system through this external sinus, become a serious menace to health and the life of the patient, because a certain quantity of bile, as we know, is necessary to carry on the digestive functions properly.

By means of the "Murphy Button," cholecystenterostomy has not only become a remarkably simple and easy operation, but judging from the uniformly successful results published within the last few months, it appears to be one of the safest operations in abdominal surgery. It is, therefore, not at all surprising that Murphy, the ingenious inventor of the anastomosis button, and his followers have been decidedly partial to cholecystenterostomy in all cases in which operation is indicated, when we consider that both operations are about equally safe, and that the latter has the advantage that it does away with the not uncommon sequela of a biliary fistula and establishes at once a new channel from the gall-bladder into the intestinal canal, through which even the largest calculi find a ready passage into the bowel, and that it obviates the necessity of scrupulously searching the common duct for any obstruction for the purpose of removing it. I am not aware of any unpleasant after-effects in the cases operated on, up to the present, but the operation is a new one, and the patients have scarcely been under observation a sufficient length of time to allow of any definite conclusions. It seems a matter of considerable importance to me, to make the anastomosis as closely to the normal communication, by means of the common bile duct, as possible. For this reason the duodenum, or, at least, the upper portion of the jejunum, should be selected. If, for some reason, this part of the intestine cannot be brought into view, as happened to me in case No. III, cholecystotomy, at least in uncomplicated cases, seems preferable.

The cases reported in this paper are three cases of cholecystotomy and one case of cholecystenterostomy, all followed by recovery. The operation of cholecystotomy was performed in two cases for cholelithiasis, the number of calculi removed being in one case twelve, in the other sixty-eight, varying in size from a pea to a hickory nut; in the other for

* Read before the Medical Society of the State of Pennsylvania, 1894.

empyema of the gall-bladder. Cholecystenterostomy was done for a permanent biliary fistula with, at least, a partial obstruction of the common bile duct, probably due to a stenosis and adhesions. In two cases (No. I and II) the gall-bladder was completely surrounded by omentum and intestines, so that it became necessary to free some of these adhesions from the anterior surface of the gall-bladder before it could be incised. In both of these cases the walls of the gall-bladder were very much thickened, in one (No 1) not less than three-quarters of an inch, and strong suspicions of malignancy were entertained at the time of the operation, but the patient, now over a year since her operation, is in perfect health.

CASE I.—Mrs. R. W., æt. thirty-nine years; seven children, youngest one year. During her last pregnancy had two, three or more paroxysms of pain in right hypochondriac and epigastric region. After her confinement October 15, had no attacks until the beginning of April, 1892, when they returned at intervals of from four to six weeks, and during the three or four months preceding the operation, these paroxysms came on every week, sometimes even two or three times a week, keeping her confined to bed half of her time. I saw her for the first time six or seven weeks before her operation, when she was suffering from an attack of local peritonit is, compelling her to remain in bed about two weeks with elevation of temperature to 101, vomiting, tympanitis and icterus. Over the region of the gall-bladder a mass could be mapped out exceedingly tender, about three inches long and one and a half wide.

Operation March 22, 1893, at Mercy Hospital. Vertical incision three inches long over seat of tumor; this was found completely covered with omental and intestinal adhesions, which had to be separated in front of the gall bladder before it could be incised. Walls of gall-bladder about three-quarters of an inch thick, exceedingly friable, so that sutures would scarcely hold, suggesting malignancy; they were sutured to abdominal incision. Ducts were found unobstructed. Sixty-eight calculi of various sizes were removed. Rubber drainage introduced and gall-bladder washed out. Fistulous opening closed on tenth day, and patient has remained in perfect health ever since.

CASE II.—Mrs. Agnes K., referred by Dr. J. C. Hierholzer, æt. fifty-three, was suffering for seventeen or eighteen years from burning and tearing pains in the hepatic region, with vomiting at intervals of various duration and treated by different physicians for pleurisy, bilious attacks, neuralgia, etc. Present illness began in March, 1893, with severe pains of paroxysmal character, irregular elevations of temperature, dry tongue, constipation, very severe headache and no jaundice. Marked tenderness over region of gall-bladder, which was distinctly enlarged, reaching about four inches below border of ribs, Operation July 3, 1893, at Mercy Hospital. Usual incision exposed gall-bladder surrounded by omental and intestinal adhesions; these were broken up over anterior surface to make room for incision. Walls of the gall-bladder very much thickened; sutured to abdominal wound; gall-bladder contained several ounces of mucus and pus, but very little bile and no calculi. Rubber drainage tube inserted and gall-bladder washed out daily. Discharged from the hospital completely relieved, but with biliary fistula which closed completely three or four months after operation. at present she is in perfect health; she has a small hernial protrusion at site of operation. This case is interesting on account of the history of biliary colic extending over seventeen or eighteen years, with attacks of local peritonitis and a beginning empyema of the gall-bladder without a trace of any calculi.

CASE III.—Mrs. D., æt. twenty-nine; for over a year had paroxysms of intense pain in epigastrium and right hypochondrium, lasting from a few minutes to several hours, accompanied by vomiting. During the last few months these have returned at shorter intervals, sometimes daily, scarcely less than two or three attacks a week, so that her general health began to fail. Occasionally her conjunctiva was slightly icteric, but there was never any distinct jaundice. The region of the gall-bladder was examined repeatedly, but while always tender to the touch, it was never found enlarged. Repeated examinations of stools proved negative. Her condition became so miserable that we at last decided to explore the gall-bladder. Operation was performed January 28, of this year, at the Mercy Hospital. Gall-

bladder not enlarged and free from adhesions, considerably distended with almost clear fluid. Ducts were free. Wound in gall-bladder attached to abdominal wound and twelve large, hard gall-stones, without any facets, but with rather sharp points, removed. Left hospital February 24, still discharging bile. Discharge gradually lessened, biliary fistula closing up completely for a few days at a time, then opening again, but is now completely healed. She has gained flesh since the operation and is in good health, but is troubled with flatulency, giving her some pain in the epigastrium, which is, however, immediately relieved after a free eructation of gas.

CASE IV.—Miss Bella F., æt at twenty-five, admitted to the Mercy Hospital, April 3, 1893; service of Dr. C. O. Goulding, with the diagnosis of typhoid fever. As typhoid fever, the case was of more than ordinary severity, the temperature reaching 103 and higher for eleven days. April 16, patient was seized with severe pain in epigastrium, followed by vomiting for twenty-four hours. A tumor was noticed two days later in the hypochondriac region, somewhat the contour and about the size of a kidney, not very tender on pressure. During the next few days, tenderness over tumor increased and pains of a lancinating character were complained of. Temperature and pulse still increased.

April 26, under ether narcosis, Dr. C. O. Goulding made an incision over the region of the tumor, which, when exposed, was of a livid color, deeply congested, of oblong shape and fluctuating, extending down nearly to illiac fossa. Not adherent at point of incision, but slightly adherent to abdominal wall over limited area below. Tumor was not incised, but wound was packed with iodoform gauze.

April 28, two days later, during which time patient's condition had somewhat improved, the tumor was opened and about half a pint of viscid, semi-transparent fluid containing pus was removed.

May 1, great amount of biliary fluid discharged since; removed several fragments of gall-stones. Several other stones were removed at varying intervals, the fistulous tract gradually growing smaller in the meantime.

June 5, sinus dilated with laminaria tent and several stones removed; some days later a stone was found occluding cystic duct as shown by a continuous discharge of considerable mucous, but no bile; stone was located three and a half inches from external opening, but all efforts to remove it by forceps or irrigation proved useless.

July 12, she was again anesthetized, fistulous opening enlarged in line of old cicatrix one and a quarter inches. Efforts at extraction failing, the stone was crushed and fragments removed. It was not faceted, almost round, diameter about three-quarters of an inch. Wound was packed with gauze and allowed to heal by granulation. Bile discharged freely after operation. Patient's condition much improved and gained in weight. Fistula was almost closed and patient allowed to go out of the hospital August 24, continuing under observation. For above notes, I am indebted to Dr. C. O. Goulding, her attending physician.

Cholecystenterostomy: Above patient was readmitted to Mercy Hospital, September 8, and through the kindness of my friend and colleague, Dr. Goulding, transferred to my department. Biliary fistula has been discharging a great deal of bile since leaving the hospital, and she is complaining of considerable pain and tenderness over region of liver and gall-bladder and is constipated. She is very anxious to be relieved, not only of her biliary fistula, but of her pain which is more or less constant, and keeps her awake at night. For this reason, after the usual preparations, an exploratory incision was made on September 15, 1893, about four inches in length between the old cicatrix and the median line. The adhesions posterior to the liver were so firm, that the intention of examining the common duct and removing any obstruction that might be located there, had to be abandoned and cholecystenterostomy was performed in the hope that a new free channel between the gall-bladder and the intestine would not only cure the biliary fistula, but relieve her of her pains. The duodenum was so firmly bound down by adhesions, that it could not be brought up; a loop of the jejunum was therefore picked up, the gall-bladder opened near its abdominal attachment, and attached to the jejunum by means of the "Murphy Button" in the usual way. The abdominal wound was closed by silk-worm-gut sutures, and a piece of iodoform gauze

was packed into the old biliary fistula. The patient rallied well from the operation; two hours afterward her pulse was 76 and temperature 100⅘°.

The first two days after operation, a large quantity of bile was discharged through the fistulous opening, and on the third day she showed some signs of jaundice.

September 23, there was some blood mingled with the bile discharged; the skin surrounding the fistula had become slightly eczematous. In the evening of the same day, when the dressing was changed, there was only a very little blood contained in the bile discharged, but it had a distinctly fecal odor.

September 26. The discharge does not contain so much bile as formerly, but seems to consist of mucous and fecal matter tinged yellow by bile. Eczema of skin still very annoying. For fully a week there was quite a copious discharge of mucous and fecal matter, so that the dressings required changing three or four times a day. No rise of temperature since September 23.

October 11. Patient sat up nearly the whole afternoon; during this time the button was passed by the bowels, just twenty-seven days after operation.

October 20. Dressing showed no evidence of discharge for two days; eczema all disappeared; laparotomy wound completely healed; patient is able to be up all day and feels quite well.

Since her discharge from the hospital she has been able to return to her work as a servant girl, and has been in very good health until about three or four weeks ago she feel down a flight of stairs, alighting on her right side over the old cicatrices, which gave rise to considerable pain over the region of the gall-bladder.

In a similar case of biliary fistula, it would be preferable to separate the adhesions between the gall-bladder and the abdominal wall, and place the male portion of the Murphy Button into this old fistulous opening, and unite that with the intestine. This has the advantage that no new opening is required in the gall-bladder, and that the fistulous tract in the skin can be closed at once, doing away with all biliary and fecal discharges with which the convalescence of this case was complicated. The fact that the gall-bladder remains attached to the abdominal wall after anastomosis is made, interferes with its contraction and favors the continuance of the fistula.

Ultimate Prognosis of Neglected Adenoid Hypertrophy.

Dr. D. Bryson Delavan (*Medical Record*) says:

The question is asked, does adenoid hypertrophy, if left to itself, disappear, leaving the vault in a normal healthy condition? Generally speaking, it does not, but remains under some pathological state, which may continue throughout the life of the patient.

The enlargement may not subside, and a degree of hypertrophy sufficient to cause serious injury and annoyance may continue to exist for may years.

The so-called "Thornwald's disease" appears to be nothing more than neglected adenoid hypertrophy.

Disappearance of the hypertrophy may be attended with an atrophic condition of the vault of the pharynx, the result of which is a pathological state detrimental to the patient and difficult to cure.

The above conditions may influence not only the locality in which they arise, but may have far-reaching and disastrous effect upon other organs. The ultimate prognosis as to the local condition, therefore, in cases of neglected adenoid hypertrophy, is unfavorable.

Infantile Pneumonia.

Most authorities agree that the pneumonia most frequently met with in young children and babies is the catarrhal variety, and the areas involved in this process necessary to make the baby a very sick one, are often so small that diagnosis by physical examination of the chest is sometimes very hard to make. It is in this case, however, that the pecularity of the cough gives us valuable aid in coming to a conclusion as to the presence of pneumonia. Where the baby gives one or several short coughs, followed immediately by a suppressed cry, with an expression of pain on the face, it is very suggestive, and if this sign is accompanied by dyspnœa, in which the nasal alæ play more or less violently and the temperature is elevated, we will rarely go astray in making a diagnosis of catarrhal pneumonia, irrespective of physical signs.—*Ex.*

MUSCULAR ASTHENOPIA AND ITS TREATMENT BY GRADUATED TENOTOMY.*

CHAS. HERMON THOMAS, M. D., PHILADELPHIA.

During the past decade a great advance has taken place in our knowledge of the anomalies of the ocular muscles. Until well within that time, the standard text-books on ophthalmology, so far as I am aware, recognized the so-called insufficiency of the internal recti only, as the cause of muscular asthenopia; affections of the remaining muscles being treated solely in their relations to diplopia and strabismus. It is now almost universally conceded that the opposing and vertical muscles are subject to like defects, with corresponding symptoms of equal or even greater importance. Recent editions of systematic treatises show that most writers now give to the whole range of muscular anomalies the prominence which their importance demands. Among these may be mentioned the latest edition the work of Noyes, which treats the subject elaborately, and also the works of de Schweinitz and of Norris and Oliver, both of which latter deal with it at considerable length. The increased interest and scope which the subject has acquired has resulted in the very general adoption of a new and systematic nomenclature—that originally proposed by Stevens. This improved terminology is employed by the authorities just named and is also introduced in the recent American editions of the works of Fuchs and Juler. As showing the increased importance accorded to the subject, it is worthy to be mentioned that at the meeting of the Pan-American Medical Congress, held in Washington within the past year, one day out of four was allotted by the Ophthalmic Section to the discussion of disorders of the ocular muscles.

The form of asthenopia under consideration results from disturbance in the normal use of the eyes as a pair—in effect acting as one single and not two separate organs—œil cyclopienne. The uncontrollable impulse to secure binocular vision, throws upon the extrinsic muscles of the eye a constant and delicate service during the continuous effort to maintain accurate adjustment in the fixation of objects viewed. Interference with the movements of the eyes by disturbance of the normal relations of their muscular components, calls for an excessive expenditure of nervo-muscular energy, to secure compensation and maintain the eyes in the proper position to secure single binocular vision. Exophoria—divergence defect—may demand the utmost exercise of the power of convergence, constantly applied; esophoria—convergence defect—on the contrary, that of an excess of abduction, involving the development of an unusual and abnormal innervation and muscular action. Such efforts may prove exhausting and are frequently the cause of disturbances which manifest themselves in a series of symptoms more or less marked and important.

The symptoms most frequently observed are, a sense of fatigue in the eyes, more or less constant and usually aggravated by definite use; objects viewed become indistinct and sometimes double, with occasional transient strabismus; headache; photophobia; dizziness; great discomfort while looking at moving objects, and when the patient is himself in rapid motion, as in looking out of a moving railway train; pain in using the eyes for definite fixation, which pain is frequently referred not to the eyes alone, but to the frontal, temporal or occipital regions, rarely to the vertex. Indeed, a large proportion of cases of headache, whatever the special variety, are symptomatic of eye-strain due to ocular defects and, many of them, to disturbances of the ocular muscles. Headache may supervene at once upon use of the eyes or it may be delayed.

The following conditions, alone or variously combined, are frequently present:—pain in the back; drowsiness in some, insomnia in others; a variety of reflex neuroses; mild blepherospasm, involving a few fibres only of the orbicularis; twitching of the eye-lids; palpitation of the heart; night terrors; nausea; indigestion; constipation and a host of other symptoms.

These symptoms and such as these, however, it will be seen, are often associated

* Read before the Medical Society of the State of Pennsylvania.

with accommodative asthenopia as well; excepting only the trasient diplopia or strabismus mentioned, and which is of infrequent occurrence.

On the whole, it may be said that the subjective symptoms of asthenopia as elicited in the consulting room, show almost no distinctive characteristics pointing to their especial origin, whether refractive or muscular; the same headaches and the same sense of eye-strain are complained of under both conditions. The test which has been given as differentiating the two disorders, namely, the use of one eye, the other being excluded from the act of vision for a time by covering it, has, in my experience, usually proven inefficacious.

Practically then, though the subjective symptoms alone are often inadequate to show the existence of muscular defect, objective investigation usually yields definite and uniform results, often indeed showing an exactness scarcely inferior to those obtainable in refractive determinations. Sometimes, but very rarely, the conditions found are inconstant or even erratic, and then great care is required in the estimation of their value.

As regards objective tests, the so-called cover test is the most readily applicable and is deserving of much confidence; it should not be omitted in any case. The diplopia tests such as vertical prisms, Maddox rod, etc., and the determination of abduction, adduction and sursumduction are indispensable in reaching a reliable conclusion.

It should be a fixed rule of practice to eliminate first the refractive and accommodative elements in any case under examination, by the proper glasses, leaving the muscular conditions to be dealt with at the last. Under these circumstances, it will be found occasionally, though not as frequently as could be wished, that the muscular anomalies vanish after correction of errors of refraction and accommodation; the final test as to which of these may be the active disturbing agent in any particular case, must frequently be the therapeutic test.

The following cases selected from my case books are presented as illustrative of the clinical history, treatment and its results in patients, the subjects of disorders of the ocular muscles:—

I.—T. H. L., mechanical engineer, aged 42, referred to me by Dr. W. H. H. Githens, June, 1891. Wearing high hyperopic correction combined with prism before each eye, 4 degrees, base in. Divergent squint, right eye deviating, except when attention is fixed. Diplopia except on great and tiresome effort, notwithstanding the prisms worm; much headache, confined mostly to the region of the brow. Reading and other definite and constant use of the eyes always at the expense of fatigue, which is only partially relieved by covering one eye; a page of ordinary size often overlaps one-half. Is particularly disturbed by sounds which are slight and not ordinarily noticed. Has multiple false images, monocular. Exophoria 14°. Operation, right exturnus, complete section, immediate result, Orthophoria. Two weeks later, Exophoria 8°, operation, complete, retrenched with suture, result, Orthophoria. One month later, Exophoria of 3°, reasserted. Exophoria in accommodation 20°.

Expresses much satisfaction in the comfort derived from the operation. Has no tendency to diplopia for distant, but somewhat for near vision. Has a new sense of solidity in objects reviewed; is conscious of definite binocular vision. There is also relief of the headache and of the abnormal sensitiveness to sounds. Finds that the use of eyes, as in accurate examinations of instruments and drawings, is now possible where it was not before. The false images, monocular, noted at the first visit, have almost entirely vanished.

Three years later, there is an Exophoria of 2°, Exophoria accommodation 26°, and an Ab. of 4°, and an Add. of 11°. Has passed the intervening time since the operation in occupations involving much use of the eyes, but in entire comfort.

II.—H. R. S., aged 48, master builder. A man of great physical strength and endurance; suffers severe pain localized in the eyes; complains particularly of the right eye feeling as "if it were drawn out by a cork-screw." This is accompanied by general nervousness and irritability with a prickling sensation over the whole body, after reading for a comparatively short time. Eyes feel dry and uncomfortable. All discomforts vanish to a great degree when away on vacation and the eyes are resting, except a severe headache which has been habitual and almost constant for years. Has high hyperopia, R 5, D. L 4, D.

Convergence defect; Es. 5°. Tenotomy right internus, result, Orthophoria. Four months later reported no headache since the operation and that relief occurred within 24 hours. All the symptoms before described have vanished. Patient highly appreciative of the change for the better which has taken place.

III.—H. W. P., retired merchant, aged 64; makes no complaint of pain or sense of strain, but only of some annoyance or inconvenience in the use of his eyes. He has a hyperopia of 1D, which corrected, gives him full vision in both eyes. He is able to fix distant and near objects with both eyes and at no time is there any manifest strabismus. He has a habit of opening and closing his eyes alternately every few seconds, during which act he elevates and corrugates the brow of the open eye excessively. This he does both in reading and in conversation, producing a very grotesque appearance, and, which being much remarked by his friends is, perhaps, the principal reason why he seeks advice.

A muscular test shows a divergence error, exophoria 20°, with a left hyperphoria of 2°. After wearing correcting prisms for a few days, the Ex. increased to 25 degrees and the Hy. vanished. An operation was then performed, a complete section of the right externus, resulting in a reduction of the Ex. to 13 degrees; and two days later a tenotomy was made on the right externus, not entirely complete, leaving an Ex. of 6 degrees. Six months later there remained an Ex. of 5 degrees. The habit of opening and closing his eyes alternately which was plainly an instinctive movement to avoid diplopia, had ceased with the operation and he expressed himself as entirely comfortable. His appearance is greatly improved. The small amount of exophoria remaining I deemed it conservative, under the circumstances, to leave uncorrected.

IV.—R. T. B. referred to me by Dr. Stubbs of Wilmington. Suffers from intense nervousness, extreme insomnia with mental depression, accompanied by suicidal fears. Close application to her work, (that of painting fine decorations on silk) causes distress of a grave character in the forehead near the eyes, sometimes running down the nose and extending to the face. Has had headache only recently. Uncontrollable winking at times, very troublesome, frowns habitually. Eyes not pained by use. Prickling sensation over the whole body, at all times, but mostly at night. Refraction normal, Es. 1°, Hy. 1°. Prescribed vertical prism correcting hyperphoria, which gave immediate relief, frowning ceased. Much irregularity of reaction of vertical and lateral muscles, but Es. of 10° proving very constant tenotomy of right internus was performed. Great improvement and abolition of all symptoms followed immediately. Three months later, orthophoria was established. Insomnia and nervous symptoms entirely abolished. Patient describing her condition said she was now entirely comfortable.

V.—W. J. D., aged 35, bookkeeper, referred to me by Dr. E. J. Nolan. Has high compound hyperopic astigmatism, for which he wears the correcting glasses, but complains of pain around the eyes with dull pains in the occiput. Symptoms aggravated by use of eyes for near work, interfering with regular duties. Has manifest Es. 12°-15°. Ordered prisms aggregating 10°, base out which were worn for a week with comfort. Es. advanced meantime to 22°. Tenotomy, right internus, complete section, result, Es. 4°. A week later 12° was manifested with marked recovery from convergence under cover test. A second operation, left internus, section almost complete; result, orthophoria when his sphero-cylinders are worn, though there is recovery from convergence, Es. 6°, when glasses are removed. Reports entire comfort and ability to use his eyes to an unlimited amount.

Considerable discussion has taken place as to the relative frequency of esophoria and exophoria, and different writers have asserted a marked preponderance on either side. A review of my cases for the last nine years shows that in the operative cases, as between esophoria and exophoria, these are almost exactly equally divided; and while there has been a certain variation on one side or the other from year to year, a close parallelism has been maintained in the main throughout the whole period. This examination also shows, as regards the refraction in both these forms of heterophoria, that hypermetropia predominated. The predominance of hypermetropia was more marked in the cases of esophoria than in those of exophoria, as the following figures show:

In esophoria the relative frequency of H. over M. was in the proportion of 3¾ to 1; in exophoria the relation of H. to M. was as 2½ to 1. Thus, while the most of the cases of heterophoria show hyperopic refraction—as is to be expected considering the greater frequency of this condition over myopia; when the static refraction is viewed in its relation to the accompanying heterophoria, we find that hypermetropia is usually accompanied by esophoria and myopia is most frequently associated with exophoria.

There is still to be found occasionally one who maintains the opinion that a complete tenotomy is required in every case of heterophoria calling for operation, on the assumption that no gain whatever is to be derived from partial severance of the tendon. My experience leads me to a directly opposite conclusion.

In my first paper on this subject, written six years ago*, I stated in effect that the fan-shaped expansions of the tendons of the recti at their insertion in the sclerotic are wider and thinner and their margins more elastic than is generally appreciated; and, that the elasticity of the margins is an influential factor in the production of a relaxation of tension in the tendon, graduated and definite in amount and permanent in character, permitting the effectual cental portions of the tendon to retract and form a new attachment to the globe further back. This I desire at this time especially to reaffirm and to add that graduated tenotomy is practicable and effective, only because of the elasticity of the margins of the tendons. No attempt is here made to distinguish between the tendon and its immediate covering derived from Tenon's capsule; for distinct as they are anatomically, they are one surgically, for the purposes of this operation, at least, and are to be treated as one.

It is true that occasionally a case is found in which no appreciable change in position occurs until complete severance has been accomplished, but such cases are altogether rare and exceptional. In the great majority of cases a gain graduated from 1 degree to 8 degrees may be made without complete severance. In those exceptional cases referred to, the tendon is thick and narrow at its insertion, and the elastic margins are either deficient or absent.

The technique of graduated tenotomy involves considerable difficulty and complication at times, and the performance of the operation is not to be looked upon as in any case a trivial procedure. It is an altogether more delicate and difficult operation than that for strabismus; and not less so indeed than any other operation done upon the eye-ball, not excepting that for cataract; but, when skillfully performed, it may be expected to yield definite and satisfactory results. It cannot be successfully undertaken without special instruments. Those devised by Dr. Stevens leave little to be desired. The ordinary strabismus instruments are altogether unsuitable by reason of their coarseness and clumsiness and should never be employed.

A study of nearly ten years faithfully pursued in all cases of asthenopia coming under my care has led me to the following conclusions:

Muscular asthenopia may present symptoms of all grades of importance, from the slightest to the most serious.

The muscular conditions in every case should, as a matter of routine, be as carefully investigated as are the media, eye-ground, refaction and amplitude of accommodation.

As in refractive, so in muscular asthenopia the gravity of the symptoms bears no constant relation to the amount of the physical defect. It is impossible to predict with any considerable degree of definiteness, the result of correction of either refractive or muscular error. As much and very much the same kind of relief is to be expected from the correction of the muscular anomalies as from the correction of errors of refraction and accommodation, as might be expected from the similarity in the symptoms which these conditions respectively cause.

During the earlier years of my study of these cases, I gave considerable attention to the graver neuroses—especially epilepsy—in connection with muscular anomalies; continuing the observation of a series of epileptic cases throughout a period of about five years. The results obtained in this series were altogether negative, not one recovering. With expectations of

*Graduated Tenotomy in the Treatment of Insufficiencies of the Ocular Muscles by C. H. Thomas, M. D. *Trans. Philadelphia County Medical Society*, March, 1888.

cure of epilepsy greatly abated, I nevertheless consider it proper to remove eye-strain of muscular origin in this affection as I would in any other condition; and for the additional sufficient reason that sound conservatism in the management of epilepsy calls for the removal of all possible sources of peripheral irritation.

TRANSLATIONS.

SALOPHEN AS AN ANTI-RHEUMATIC.*

DRS. B. CIULLINI AND A. VITI.

The following observations were made by the authors at the Clinic of Prof. Raimondi at Siena, and under his supervision. On the ground of these studies they consider Salophen an excellent remedial agent, both in acute and chronic rheumatism, its advantages over salol and salicylate of soda being that it is tasteless, not hygroscopic, and devoid of unfavorable after-effects.

CASE 1. S. M., female, aged 48, married; suffering from chronic articular rheumatism. Complains in the joints, especially of the right side, and also pains in the jaws; right knee slightly enlarged. January 26th, salophen 2.50 Gm., was administered. Slight diaphoresis was produced, but pains continued of the same intensity. No after effects. January 27th, Salophen 2.50 Gm., given, with slight relief of pains. January 28th, same dose; no change. January 29th, same dose; pain and swelling somewhat relieved; administration of remedy continued in same doses until February 4th, but as no improvement was observed, iodide of sodium was substituted which also failed to afford relief.

CASE 2. C. G., male, aged 59, had his first attack of acute articular rheumatism at the age of nine years, but enjoyed good health up to February 7th, 1893. Entered the Clinic February 13th, with tumefaction and pains in all the joints of the lower extremity, especially the tibio-tarsal, and also in the shoulder and elbow joints. On following day Salophen 3.0 Gm., divided in six doses, at intervals of two hours. The first dose was followed by a profuse perspiration which lasted six hours. No disturbance of the stomach or nervous system. Pain in the joints rapidly relieved; patient slept well. February 15th, Salophen 3.0 Gm.; no change. February 16, daily quantity increased to 4.0 Gm., divided in six doses. Profuse perspiration, pains slightly increased, no disturbance of stomach. February 17, remedy continued in same dose, and some improvement manifested, but pains reappeared during the night, especially in the tibio-tarsal articulation. During the following days under same treatment, pains disappeared entirely.

CASE 3. P. R., female, aged 45, married; subacute rheumatism, swelling and pains in various joints, especially the ankle and knee. February 17, salophen 3.0 Gm., in six doses. The first dose produced some diaphoresis, but no improvement. On the following day, dose increased to 4.0 Gm., and same quantity administered until February 20, when the remedy was replaced by sodium salicylate, which effected a cure in four days. A recurrence of pains ensued, and the patient was readmitted March 21st. Under administration of salophen for several days, followed by iodide potassium, complete relief was obtained.

CASE 4. S. S., aged 26; entered Clinic March 29, 1893, suffering from pains and swelling in various joints, knee, ankle, hip and wrist, of subacute character. Salophen was administered for seven days, in doses of 4.0 to 5.0 Gm. daily, reduced to 3.0 Gm., and produced rapid improvement, reducing the temperature and relieving the pains and swelling. Afterwards the cure was completed with iodide potassium.

CASE 5 A. C., aged 22, male; had suffered from repeated attacks of acute articular rheumatism. Admitted to the Clinic May 12th, with severe pains in the

* Translated for THE MEDICAL AND SURGICAL REPORTER.

arms and shoulders due to the subacute rheumatism. Salophen administered 4.0 Gm. in five doses, at intervals of three hours. Pains relieved, slight diaphoresis, no digestive or nervous disturbances. The dose was increased to 5.0 Gm. daily, and after five days employment salophen was replaced by salicylate of soda which acted more energetically and completed the cure.

CASE 6. M. V., aged 29, female; admitted to Clinic June 23d, with subacute articular rheumatism of the joints of the upper and lower extremities, especially the elbow, wrist and knee. Pains and swelling were present. Salophen 1.0 Gm. every three hours was administered, the first dose being followed by prolonged sweating, but no digestive disturbance. On next day, daily quantity of the remedy was increased to 6.0 Gm. and pains relieved. The remedy was continued until June 28th, when it was replaced by iodide of sodium which effected a rapid cure.

CASE 7. S. A., aged 47, male married; had suffered from subacute articular rheumatism, with swelling of affected joints. Salophen 1.0 Gm. every three hours, and continued for one week afforded some relief of pains. Salicylate of sodium then substituted, and employed for about one month with fairly good results. Later iodide of sodium and Piperazine administered, but no complete cure obtained.

CASE 8. M. E., aged 35, admitted September 23rd, acute articular rheumatism of all the joints; pains, swelling and impaired mobility being present especially in left ankle and knee joints. Temperature 38° to 39° C. Salophen given for six days, in 1.0 Gm. doses five times daily, and decided relief of pains and reduction of temperature manifested after two days' administration. Salicylate sodium then given for three days, and patient left Clinic October 25th., perfectly cured. In this case also, salophen showed itself preferable to salicylate of sodium, and acted as an efficient antipyretic and diaphoretic.

The author's conclusions are as follows:

Salophen is an active anti-rheumatic, better tolerated than salicylic acid and salicylate of soda and more innocuous than salol. In severe acute and chronic rheumatic affections it is somewhat less effective than the salicylates, and its chief indication is in the initial stages of acute arthritic and in mild or subacute cases. In obstinate or chronic cases it is advisable to follow its administration with that of iodide of potassium. The antipyretic action of salophen is not marked. In the intestinal canal it acts as an antifementative, and it destroys the reaction of indican in the urine. Doses as high as 5.0 to 6.0 Gm. *pro die* continued for several days are not attended with disturbances of any kind. —*Terapia Clinica,* April 4, 1894.

Effect of Climate on the Development of Children.

This is the title of a paper by Dr. T. C. Duncan in a late American Climates, which is of interest to climatologists generally. In the course of the paper he observes that physicians, who have made special observations on the difference between American and English children, report that the latter are more substantial, thickset, and less bright and active. Dr. Duncan attributes this difference to climate; England being more rainy and cloudy, and America more sunny and drier. American children are certainly more nervous from our drier atmosphere. Much of the apparent great composure of the English child is, however, an inherited as well as an acquired and cultivated sociological trait, not at all dependent upon the climate. Association has here a wonderful contagious effect. We all know that gesticulations, shrugging of the shoulders, and facial mobility during conversation, are supposed to be peculiarly Gallic accompaniments, and yet we have repeatedly seen reserved and taciturn Americans—a kind of a cross between the solemnity of our Puritan fathers and the stolidity of a blackfoot or of a Sioux—grimace, gesticulate, curve his back and hump his shoulders, wink and blink like a Marseillese the moment he acquired a fluent use of Spanish. Americans residing in England soon become more sedate, and American boys educated in England or France soon acquire more staid actions as well as a more staid form of expression in their speech, without losing any of their brightness. The moister air of England or of western Europe tends, however, to giving American children a more substantial body; they round out better and are not as restless as they are at home.—*National Popular Review.*

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SATURDAY, AUGUST 11, 1894.

EDITORIAL.

USUAL PERIOD OF HEMORRHAGES IN PLACENTA PRÆVIA.

Having recently read that at a medical meeting the statement was made, "In central placenta prævia hemorrhage usually begins about the fifth month," and knowing it to be without any foundation in physiology or in facts, we have thought that quotations from some recognized authorities in obstetrics might assist in correcting the evil possibly arising from such publicly pronounced assertion.

Depaul, *Lecons de clinique obstétricale*, said that "the hemorrhage rarely occurs before the sixth month," and that "almost all hemorrhages from vicious insertion of the placenta, are produced in the last six weeks of pregnancy."

Charpentier states that the hemorrhages almost never occur before the sixth or seventh month.

"The losses show themselves at different periods. They rarely begin before the end of the sixth month, more often nearer the full period, and sometimes not until labor has actually commenced."—*Playfair.*

"Habitually the hemorrhage begins at the seventh or eighth month, and especially in the course of the ninth or tenth."—*Nægele and Grenser.*

"In lateral placenta prævia hemorrhages generally occur only after the thirty-second week, and in the central variety between the twenty-eighth and thirty-sixth week."—*Winckel.*

This author also states that there are cases in which the bleeding takes place in the first half of pregnancy, and others, not rare, in which, of both the lateral and central variety, the first hemorrhage appears only a few days before term, and in some instances as late as the beginning of labor.

Müller, in his monograph upon placenta prævia, the best of several upon this subject, observes that in the great majority of cases the bleeding first appears in the last weeks of pregnancy, especially in the last fifteen days.

Simpson's statistics, including 89 cases, furnish the following facts: First hemorrhage in 3 cases, before the sixth month; in 5, from 6 to 7 months; in 19, from 7 to 8; in 19, from 8 to 9; in 43, in the ninth month. Depaul's 70 cases give the following: In 1 case the hemorrhage occurred before the sixth month; in 7, from 6 to 7 months; in 12, from 7 to 8 months;

in 26, from 8 to 9 months, and in 24 at term, or near it.

So astonishing is the statement quoted as to when the hemorrhage usually occurs in central placenta prævia, we cannot believe any intelligent practitioner ever made it, but rather that the reporter has substituted fifth for seventh to eighth month.

ABSTRACTS.

THE ICE BAG AS A CARDIAC STIMULANT.

A writer in *La Medicine moderne* is quoted in *La Province medicale* for April 7, as saying that the application of an ice bag over the heart, according to Dr. Jullien, is a powerful therapeutic measure. It seems that in 1887 M. Jullien read in the *Gazzette delle cliniche* an essay on this subject by Dr. Silva, and was struck with the author's conclusions. Experimentation upon animals had shown the possibility of raising the blood pressure rapidly from a hundred and twenty millimeters to a hundred and seventy and even a hundred and ninety, and of diminishing the frequency of the pulsations considerably; and these results had been confirmed clinically. M. Jullien was not slow to verify these observations for himself. One day he was called to take charge of a patient with typhoid fever. He advised treatment by means of cold baths, and transferred the patient, a large and strong young girl, to the care of a colleague. Soon afterward, however, his colleague's illness rendered it necessary for him to take charge of the case again. It was a grave one and the febrile phenomena were intense. The elevation of temperature proved rebellious to the use of cold water. Soon there was a typical picture of the ataxoadynamic form of the disease. The patient had lost consciousness entirely and lay on the bed entirely uncovered in a tetanic attitude varied only by the certain spasms of the head. The temperature remained all the time above 104°; the pulse had reached sucessfully 120, 140 and 160. Under these circumstances M. Jullien fancied that the application of ice over the heart might constitute a last resort, and he made bold to carry it out. He admits that it was not without timidity that he placed the rubber bag on the region which scarcely showed the tumultuous and enfeebled beats of the exhausted heart. He watched the pulse closely, ready to stop the attempt at first signal of danger. But in less than fifteen minutes he saw the number of the pulsations diminish and their amplitude increase; in a short time the almost imperceptible undulations of the artery gave place to more decided elevations. Whenever he removed the refrigerant the alarming symptoms returned immediately, so that after many trials he concluded to leave the ice bag in place for several days. After that the temperature yielded, the cerebral phenomena disappeared, and the patient was out of danger. He is convinced that she owed her safety to the decisive measure which he had adopted. In another case also he accomplished a result equally remarkable by this means. In conclusion, he remarks that the beneficial effects show themselves in from fifteen to twenty minutes from the beginning of the application, and reach their maximum at the end of an hour. It is true, he says that they are evanescent; disappearing rapidly when the application is suspended, but there is no danger in prolonging it as long as the general condition remains precarious. In some cases, under its action, the height of the pulsation has been observed to be tripled, which means a pulse ampler, fuller, and more tense, with the subsidence of dicrotism, intermittence, and irregularity, and with a longer duration of the diastode. An interesting fact noted is that the effects of alcohol and those of atropine on the circulation are in a measure neutralized by the ice bag. This, says the author, is not astonishing, since alcohol has the property of lowering the blood pressure by paralyzing the vasomoter nerves, and atropine increases the frequency of the pulse by parlyzing the pneumo-gastric nerve. This antagonism, he suggests, may possibly be serviceable in some cases of poisoning.—*N. Y. Med. Journ.*

NARCOMANIA.

Experts and noted writers agree that this term describes more accurately the condition of many inebriates, than dipsomania. The latter indicates a thirst mania, which is very rarely seen, and of short duration, while narcomania is a mania for relief, or the intense desire for the anesthetic effects of alcohol, opium or any drug which will quiet the physical or psychical sufferings of the organism, and is common to most cases of alcoholism. An inebriate who has become powerless to control this alcoholic impulse, and who gives way to it continuously, or at intervals, is a diseased man requiring medical recognition and care.

Such men are what may be termed defectives, and in most cases are of bad judgment, weak, erratic, changeable feelings and morbid enthusiasts. Recently the prominence which a few men of this class have taken in the affairs of the country, bring up the question of their mental condition, and suggest a new study and change in public sentiment. A practical illustration is that of a business man, at the head of a large industry, who drinks to great excess at intervals, and whose bad judgment and insane-like reasoning has on several occasions caused great suffering to those whom he employs, and the community in which he lives. Lower down, a man who drinks at intervals has attacks of delusional mania and causes distress and suffering to those about him; or commits crime which perils the interests of the community.

Another class growing more prominent, are so-called reformed inebriates, who after years of excessive use of spirits, seemingly stop drinking, and become wild agitators, and sensational leaders of impractical theories. They call themselves pioneers, socialists, and are active to change and disquiet the existing order of events. They are prominent in all new schemes for money, power and popularity; and after an uncertain period relapse, and become wilder and more irregular. They are becoming prominent in every community, as supporters or opponents of every possible good or bad theory, quackery, delusion, socialism, anarchism, and are so-called reformers of every degree. As advocates of "gold cures," they have tried the treatment and then enter upon the business of curing others. Becoming officers of branch cures, they urge the most extravagant expectations in pecuniary returns, and possibilities of curing others. Later the institution is bankrupt, and they relapse and disappear. The head centers who provide the secret remedies, wisely receive all pay in advance, and never trust, while the credulous stockholders and supporters of these branch cures, trust to the pretensions of these reformed officers.

Many of the extreme reformers, who create a large following for a time, then disappear under a cloud, are of this class of narcomanics. Sometimes in medical circles these cases appear, urging some very startling innovations in remedies and treatment, or claiming some discoveries which threaten to change all existing order of events. Not unfrequently they pose as enthusiastic advocates of some half way proprietary medicines.

The general public overlook the fact that such cases are "border briers," and not unfrequently pass over into the realm of insanity, both acting and reasoning like insane men. In the interval they may pass unobserved in may circles, and be credited as of sound mind. But when they commit crime and become objects of study, a new chain of symptoms appears pointing out states of degeneration not noticed before. Physicians should enter upon this neglected field of psychical and obscure mental symptoms, and be able to make diagnoses of cases, that are seldom recognized until they fall into the hands of specialists. Narcomania is only one of many of these obscure degenerative mental disorders, which may go so far, then stop, or continue to some pronounced phase of insanity. An early diagnosis of a paranoiac and defective brain, and appropriate care and advice, would save most disastrous consequences later. So-called habits, conduct and methods of reasoning, should be the subjects of medical study as much as the heart's action, the temperature and reflex of the body.

The narcomaniac is diseased and requires medical care and treatment, and the general practitioner is in a position to study and understand these cases more clearly than the specialists.—*Jour. Am. Med. Ass.*

AN EASY METHOD OF BATHING IN TYPHOID FEVER.

Every new medical text-book and periodical accumulates statistics testifying to the brilliant results following the use of cold baths in typhoid fever. The hospitals in which this method is chiefly carried on are almost, without exception, showing a higher percentage of recoveries than ever before under any other plan of treatment.

Why is it, then, that this method is not universally adopted and carried out in private practice? The answer is simple.

Easy as it is in a hospital with an abundance of skilled assistance, there is no method of treatment in use so difficult to carry out properly as tubbing in typhoid fever in private families.

As the family bath-room is generally out of the question on account of its inconvenient location, and use by others of the household, it becomes necessary to buy a large portable bath-tub.

Even in cases where there are two trained nurses it is necessary to call in the clumsy assistance of some members of the family to help in the lifting of the patient to and from the tub, and this is a strain on them, and not unattended with risk to the one who is sick.

There is undoubtedly still a widespread opposition among the laity, both educated and uneducated, to the use of "cold baths" in fever. A young physician must have a very strong hold on the family, and enjoy their most complete confidence, to take the risk of the responsibility, if the disease takes a bad turn later from any accidental complications, and even older men will sometimes hesitate.

A physician of high standing and extensive practice in the city recently said to me, "I do not find that tubbing is practicable in private families, much as I would like to make use of it. I have to content myself with sponging and packs, and have had some success with constant use of an ice-coil over the abdomen as a substitute. If the ice-coil acts so well in lesions of the peritoneal coat of the intestines, why should it not have a similar result in lesions of the mucous coat?"

But all these three methods, sponging, wet pack, or ice-coil, while they add to the comfort of the patient, do not cause very decided or long continued lowering of the temperature.

Again, one who has had bad results from necessary changing of the position of a patient in an advanced stage of typhoid to examine the back of the chest, or something equally simple, causing disagreeable heart symptoms, will rather dread the process of lifting a patient out of his bed for any reason whatever, especially if the patient is large and the bed a double one.

The following method, which I once saw used in a hospital in Buffalo, commends itself as a simple solution of the whole problem. I have never seen it published in any medical journal or work, and am sure that it has not often been tried.

It is a very easy thing to slip a rubber blanket under the patient, and raise the two sides and the ends at the foot and head of the bed, nine or ten inches, by a row of pillows, bolsters, sand-bags, or simple boards.

The rubber blanket ought to be of double thickness, as large as can be purchased, and special care must be given to the arranging of the corners. When this is done you have the patient at the bottom of an impromptu bath-tub, into which you can pour water at any desired temperature, and in sufficient quantity to partially or entirely cover his body.

Only two inches of water would be enough to give a cool sponge-bath ten times as efficacious as the gingerly sponging possible under ordinary circumstances, and if the sides and corners are firmly fixed you can easily make this tub hold all the water you desire. The water may be run from the nearest faucet by a rubber tube. I have found it a simpler and equally successful method to carry it in pails and pour it over the patient, starting with tepid and gradually cooling it down to the desired temperature.

The neatest method I have found by experiment is to use a large "watering-pot" with a sprinkler, such as is used for watering plants. This is a method which will not commend itself to those who dislike humble and commonplace methods to accomplish something that more complicated and more impressive methods might do.

I believe this kind of a bath will always be grateful to the patient, and if it is found necessary to use water at a decidedly low temperature, would give rise to less shock than a sudden plunge into a tub filled with very cold water. The effect on the temperature is the same as it would be under the other method with a stationary tub.

The water can be removed, without spilling a drop on the bed, by siphoning with a rubber tube, or dipping with a small pitcher or cup, or sponging. Then the blanket can be dried and left in place, covered by a clean sheet, or better yet, removed and dried in the sun.

All this needs a little care, for it would be a very serious and troublesome accident to soak the patient's bed-clothing and mattress, but the difficulty and risk to the patient cannot be compared with that attending the use of the ordinary tub. And best of all, in those cases where the family or friends must do the work, and the employment of trained nurses is impossible on account of expense, this method can always be successfully used when tubbing would be out of the question.

I have not found one single objection to the employment of the method in private cases, and cannot see why it could not be used in hospitals.—*Med. Rec.*

Music as a Healing Power.

The idea that music possesses an actual healing power is about to be tested in London. The Guild of St. Cecilia is about to build or hire a large hall, in which musicians, especially trained to sing and play the very soft music which alone should be administered to those whose nerves are weakened by illness, shall perform by day and night. Telephones will connect this composite and continuous music-room with certain wards of London hospitals. Records and data of conditions and effects are to be kept, and conclusions arrived at. —*Medical Record.*

Puerperal Convulsions and True Epilepsy.

Paquy (*British Medical Journal*) recently read notes at a meeting of a society on a patient who was frequently attacked with epileptic fits. She became pregnant, and at a delivery had 119 fits. The temperature rose to over 102°. The diagnosis between puerperal eclampsia and epilepsy depends on the history and on the absence of albuminuria in simple epilepsy. Charpentier observed a similar case. An epileptic patient had convulsions during her first labor, became pregnant again, and died after a succession of fits during the fourth month. He agrees with Paquy as to albuminuria as a diagnostic factor.

Ocular Headaches.

Dr. F. D. Green (*The Refractionist*) concludes an article on headache as follows:

1. Many cases of headache are due to ametropia.
2. Many cases are due to heterophoria.
3. Never pronounce a case as due to ocular strain until the nose is examined.
4. Inquire into the condition of the stomach.
5. In females inquire concerning the condition of the genitals and whether there is constipation.
6. Migrane may be due to ametropia or heterohhoria, but frequently is not.

The Cold Bath the Best Antipyretic.

Numerous experiments have shown beyond room for doubt that heat production of thermogenesie chiefly takes place in the muscles. Heat production is of course most active during exercise, but is continually in progress under the control of the thermic centers of the brain and spinal cord. The fact that an application of cold to the surface reflexly induces an increased thermogenesis has been used as an argument against the cold bath as an antipyretic, but MacAlister's experiments show clearly that the prolonged application of cold to the tissues inhibits heat production by cooling the muscles, while it at the same time abstracts heat.—*Modern Medicine.*

SOCIETY REPORTS.

PHILADELPHIA ACADEMY OF SURGERY.

Meeting June 4, 1894.

Richard H. Harte, M. D., Surgeon to the Pennsylvania and Episcopal Hospitals, read a paper on

A CASE OF PYÆMIA DUE TO APPENDICITIS.

The history of the case I wish to present to you this evening is as follows: A. C., aged twenty-five years, a weaver by occupation, was admitted to the medical wards of the Episcopal Hospital, May 9, 1894, at the request of his medical attendant, Dr. Ferguson, supposing the man to be suffering from abscess of the liver.

On admission the following facts were elicited, which I have copied from the Resident's meagre notes: *Family history*, negative. *Previous history*: Enjoyed good health, although not especially robust; about three years ago recalls having a short illness ushered in by a chill, the prominent symptoms of which were sharp cramplike pains referred to the lower third of the abdomen; was confined to bed for a week. (This was undoubtedly an attack of appendicitis.) *Present attack*: States that he was feeling perfectly well up to about two weeks ago, when he was awakened with sharp pains in the right iliac fossa, and in the course of the morning they were followed by a pronounced chill, succeeded by sweating; through the day he felt nauseated, and in the evening vomited.

During the interval of two weeks from the time of his first attack until his admission into the hospital, he had always once in the twenty-four hours, and sometimes oftener, a decided chill followed by profuse sweating; pain, referred in the right iliac, umbilical and hypochondriac regions was almost continuous; the bowels were watery, and moved daily; the patient was confined to bed and growing weaker.

After his admission into the medical wards all his symptoms were referred to the region of the liver, over which there was distinct tenderness. The daily chill and high temperature (106° F.) naturally led my colleague, Dr Morris on the medical side, to suspect abscess of the liver, and he transferred the case to the surgical wards for operation.

On the day after his transfer to the surgical wards I found the case very much as above stated, the right hypochondriac region being tender on pressure, liver area increased. On examining the case in the ward before operation I exposed but a small portion of the abdomen and noticed a distinct eruption which I supposed was due to the vigorous use of a scrubbing brush. The case was then taken to the operating-room and etherized, and on a more careful examination of the abdomen under an anæsthetic, I found the eruption, which I had first supposed was due to the bichloride and friction, to be pretty generally distributed over the entire trunk, and in appearance was not unlike the eruption of typhus fever, or, in other words, a distinctly morbilliform eruption. The history at that time in my possession was rather negative, and I decided not to operate until more definite data could be obtained. On the following day I saw the physician under whose care he had been and with my colleagues, Drs. Deaver, Neilson, and Morris decided to make an exploratory incision over the region of the liver. The patient was etherized, and an incision corresponding to the right semi-lunar line gave a free opportunity to explore the surface of the liver, which appeared normal. An exploration with an aspirating needle failed to reveal any purulent collections. The region of the appendix was explored through the abdominal wound, suspecting that possibly it might be the seat of the trouble; but with the hand carried down over the liver to the right iliac fossa, no evidence of trouble was apparent.

After the operation the chills seemed to be less severe, not being so frequent as before, and the temperature not rising high. The external wound closed quickly, and no symptoms relative to the operation were manifest. The next chill was four

days after the operation, and did not rise nearly to within two degrees of the height of the previous one. The next chill did not appear until the fifth day, although the patient was gradually growing weaker, and died on the tenth day after the operation. After the second chill he began to expectorate bloody mucus, sometimes a cupful of blood being expectorated during the twenty-four hours.

A post-mortem examination revealed the liver slightly enlarged and filled with a large number of metastatic abscesses, the principal pus collection and largest abscess being in the left lobe. The appendix was entirely destroyed, and its position occupied by a small pus cavity holding about three drachms of pus. The cæcum for several inches beyond its attachment to the appendix was gangrenous. There were some septic deposits in the lungs although no distinct infarcts were to be found. The reason I ascribed for the liver being affected, which is usually a secondary affection coming under the general circulation, is that the materies morbi coming from the appendix immediately entered the portal circulation—superior mesenteric vein—and consequently the first deposit would naturally be found in the liver.

The post-mortem here distinctly revealed a case of infection arising from the appendix. One peculiar feature in the case was the eruption, which was more or less misleading, although eruptions in suppurative fever, or pyæmia have long been recognized, and are spoken of by Braidwood in his exhaustive treatise on that disease.

My object in briefly reporting this case to-night, is that I think it of no little interest (without wishing to go into the subject of pyæmia, which is so familiar to all the Fellows of the Society), throwing as it does more light upon the much mooted subject of appendicitis, and again, adding its weight to the testimony that the above mentioned disease is strictly a surgical affection rather than a medical one; for I feel certain that had the true condition of affairs been recognized at the onset of the attack, the ultimate termination might might have been different.

DISCUSSION.

DR. WILLIAM J. TAYLOR: Some ten years ago I made a post-mortem examination for Dr. William Moss, of Chestnut Hill. At that time we did not know very much about inflammation of the appendix. There was a long-standing condition which was supposed to be an ulcerated condition of the bowel. It was undoubtedly due to inflammation around the appendix. There was also pyæmic abcesses throughout the liver. The patient, a boy fourteen years of age, had died of general pyæmia due to infection from his inflammatory condition of the appendix.

DR. T. S. K. MORTON: I have never met with pyæmia where abscess about the appendix was found, but I call a number of instances in literature where pylephlebitis had extended from the abscess cavity directly to the liver. I have seen one or two cases where intense jaundice accompanied this condition. One of these cases was in the practice of Dr. Steinbach. Here it was quite evident that the infection about the appendix had travelled by the lymphatic or venous route to the liver.

THE PRESIDENT: Pyæmia associated with appendicitis must be a rare condition. I do not recall having seen it. I take it that those cases in which there is distinct evidence of involvement of the liver are essentially fatal.

DR. L. W. STEINBACK: The case referred to was one of appendicitis in a young man. I saw him for the first time on the fifth or sixth day of the disease. Slight jaundice was present at the time of operation, but increased rapidly after the operation. The patient lived a week or ten days after the operation.

C. B. Penrose, M. D., contributes an article on the

USE OF THE ABDOMINAL DRAINAGE-TUBE DETERMINED BY BACTERIOLOGICAL EXAMINATION.

The subject of drainage in abdominal surgery is one about which there is still great difference of opinion, though this difference is much less than it was only a few years ago. Some operators never used drainage at all after any operations, and yet obtained exceedingly good results; while others obtained equal results, and their statistics showed that they employed drainage in a proportion of their cases, which varied, according to the individual taste of the operator, from 5 or 10 per cent. to 75 per cent.

The general advice given by the advocates of draniage was "when in doubt,

drain." It was this element of doubt which caused the diversity of practice. The doubting operators drained the most. Everything which increases our knowledge in regard to the facts which determine drainage dimishes our doubts and brings about more uniformity of practice.

We drain the abdomen for two reasons —for hemorrhage and for septic material. As the experience of the operator increases and his skill in enucleating tumors becomes greater he has less hemorrhage and, other things being equal, he drains less. Our methods of controlling hemorrhage in abdominal operations are better than they were a few years ago, the Trendelenburg posture enabling us to check bleeding from small vessels in the bottom of the pelvis, which before the introduction of this position required drainage. The operator who enucleates pelvic tumors with two fingers and closes the abdomen without seeing what he has done will necessarily have much more doubt in regard to hemorrhage and will use the drainage tube much more frequently than the operator who inspects the field of enucleation before closing the abdomen.

The second reason for drainage is the septic character of the material which escapes or is retained in the abdomen. Knowledge in regard to this fact is of great value in deciding about drainage in any case.

During the past winter, at the University Hospital, an immediate bacteriological examination has been made of the contents of every tubal or ovarian tumor which was ruptured during removal. And the report of the pathologist in regard to the septic or the aseptic character of the contents has determined my decision in ragard to the use of the drainage-tube.

I, unfortunately, have no record of the total number of cases in which such examinations have been made; but the results have been exceedingly satisfactory, for out of a series of 46 celiotomies, in which drainage was used but three or four times for hemorrhage, and only once because the microscope showed the material which escaped into the abdomen to be septic, there has been no case of peritonitis or sepsis.

The tubal contents in most cases of salpingitis are sterile. Shauta (*Archiv für Gynecologie*, 1893, No. 44) reports 192 cases of salpingitis, in 144 of which the contents of the tubes were sterile, in 33 there were gonococci, and in 15 streptococci or staphylococci.

Before I began to use this method of bacteriological examination I inserted a drainage-tube in every case of tubal and ovarian abscess where the contents escaped into the peritoneum. Now I neither irrigate nor use the draidage-tube unless the microscope shows these contents to be septic. The presence of gonococci in small numbers does not necessitate drainage. Recently the value of this bacteriological examination was illustrated by two cases operated on consecutively. Each woman had a tubo-ovarian abscess, caused by sepsis or labor. In each case the abscess was ruptured during removal, and the pelvis filled with pus. In the first the pus was found to be sterile, and I closed the abdomen without irrigation or drainage. In the second one pus contained streptococci and staphylococci and coli commune. Consequently, the pelvis was thoroughly washed out and drained.

Both women recovered without peritonitis or sepsis, though the convalescence of the first was very much easier than that of the second.

The examinations have been made for me by Dr. Beyea. Cover-glass preparations of the material to be examined are made and are fixed in the flame of an alcohol lamp, and stained with carbol fuchsin. The microscopic examination is made with a Leitz 1/12 immersion lens.

The examination is quickly and easily made, and I think that no operating room is completely equipped without facilities for such bacteriological examinations. They furnish us with scientific data from which we can determine the propriety of an important surgical procedure, which otherwise depends upon the whim or prejudice of the operator.

DISCUSSION.

DR. J. EWING MEARS: I think Dr. Penrose has made a very valuable contribution to the literature of this subject. I am reminded of some work of a similar character which has been done by Dr. L. McLean Tiffany, of Baltimore. At the recent meeting of the American Surgical Association, in the discussion on empyema, he stated it was his custom to submit the fluids removed from the chest cavity to bacteriological examination, and the ques-

tion of the kind of operation and washing out the cavity was determined by the result of this examination. The value of this work cannot be over-estimated. It enables us to make our diagnosis positive, and determines the character of treatment to be employed.

Dr. Richard H. Harte: I believe with Dr. Penrose that no operating room is complete without a suitable bacteriological plant. At the Pennsylvania Hospital, with the assistance of the pathologist and one of the residents, I have been trying to do some work of this character, and have derived a great deal of assistance from it. I notice in a number of operating rooms in new hospitals that a bacteriological room is also provided. A great deal of information as to the necessity for drainage can be obtained in this way.

CONVULSIONS AND RICKETS IN YOUNG CHILDREN.

A late Review of Insanity and Nervous Diseases contains an interesting translation by Dr. Kaumheimer, on the mutual relation of tetany, rickets, and laryngeal spasm or spasm of the glottis in childhood, something which deals with a subject that is not fully appreciated or understood until one is brought in contact with a case. Of the many works on diseases of children that are used as text-books, none contain as lucid or as graphic a description of this condition as the really classic work of West.

In these days of bottle-raised infants the disorders that arise from malnutrition, and which often drift into tetany and rickets from the latter cause, are more numerous than one might at first imagine. Kassowitz, in the above translated paper, observes that laryngeal spasm is found almost exclusively in children who present unequivocal symptoms of active rickets, and he finds it to be more prevalent in the winter and spring months. In this connection Kassowitz calls attention to the nervous disturbance found in rickety children, such as insomnia, localized sweating of the head, starting at slight sounds, expiratory apnea and spasm of the glottis, and generalized convulsions. The former symptoms precede the convulsions in rickets, and the family physician can not too urgently insist upon the need of a better general hygiene—which includes the very important and the all-powerful question of a proper diet—upon noticing any or being told of the presence of the premonitory symptoms that warn us of the danger of a general convulsion from this cause. In some children there is at the outset an hyperexcitability of the facial nerves, while in others we have observed a peculiar dry cough, such as ushers in the incipiency of Potts' disease of the spine.

In a general way a child is well under way in the disease before the parents consides its condition sufficiently important to call in a physician. In most cases the physician is really not called until violent convulsions have occurred. The physician may reach the patient during a convulsion, and it is then that he must bear in mind the connections that exist between laryngeal spasm and rickets and the condition he is called to attend. The parents and neighbors will have probably concluded that it is a case of worms, but in a case of convulsions due to rickets we must at once assure ourselves as to their real cause, as an entirely different plan of treatment must be pursued. Kassowitz places his main dependence on phosphorus. Cod-liver oil —not the emulsions, but the pure oil— administered both internally and externally, has proved a valuable remedy in our hands. West advises cod-liver oil and iron, careful dieting, and change of air. During the convulsion, cold—ice if procurable—applied to the head, and chloral with bromides are the appropriate remedies; at the same time the bowels should be freed of any irritation by enemata. As before said, however, the parents and the physician should at once look into the child's condition upon the first appearance of any of the premonitory symptoms that denote that the child is drifting into rickets, and not wait for a convulsion. The physician called when a child is in convulsions should well differentiate between the various causes that tend to produce convulsions, and he should be on the lookout for rickets.—*Nat'l Popular Review.*

CURRENT LITERATURE REVIEWED.

IN CHARGE OF ELLISTON J. MORRIS, M. D., AND SAMUEL M. WILSON, M. D.

ARCHIVES OF PEDIATRICS

for July. Dr. J. Henry Fruitnight writes of

Infantile Scurvy, Especially its Differential Diagnosis.

This trouble is increasing, especially among the more wealthy class, because the children are less frequently breast-fed than they are among the poor, and because it is becoming a custom to use prepared baby foods, sterilized milk, etc. The poor on the other hand have not money to waste on these preparations, and if a baby is not breast-fed it is given such a variety of tablefood that scurvy, at least, is not apt to develop.

Mr. Babes (of New York) investigating the histology of the disease, finds a lessening of the number of red corpuscles and a decided leucocytosis.

To show the symptomatology of the disease some clinical records are given. The first of these describes a child puny at birth, who was taken from the breast at the end of the first month, on account of the mother being phthisical. The child showed no evidence of this disease.

The child was fed on a "baby food" and failing in health was transferred to sterilized milk, but seemed constantly hungry, was given one artificial food after another and failed to improve. The mother noticed the child commencing to shrink from her daily bath, then that the left ankle was becoming tender, then that the right arm gave pain when moved. The gums now became swollen and dark, and then began to bleed when touched. Acute articular rheumatism and difficult dentition were diagnosed and treated without benefit.

When seen by the author there was a tense fusiform swelling at the left ankle joint, another at the knee, both very tender. Temperature was 100°, pulse feeble and rapid, gums dusky purple with unhealthy granulation tissue, cheeks and tongue ulcerated, ecchymotic spots over the limbs, abdomen, and back, and, over the right eye, a spot giving the appearance of a black eye. Blood was passed in the stools, but there was no diarrhœa.

Under treatment by Pasteurized milk prepared Freeman's method, and by orange juice ʒi every two or three hours and one and one half grains of the citrate of ammonium and iron every four hours, the child made a perfect recovery. The legs improved first, then the mouth, finally the ecchymoses were absorbed.

The second case had the typical appearance and the history of rickets. When seen the temperature was 103°, the thighs just above the knees were swollen and tender, unmovably extended and any attempt to move them caused an increase in the cries of pain.

A supparating haematoma due to subperiosteal effusion, was found posteriorly and above the right knee and burst the next day. Below the knee was an extensive lymphangitis. The gums were spongy, dark red, ecchymotic.

The child was given good cow's milk diluted with one-third oatmeal water, orange and lemon juice, twenty drops every two hours, and scraped apple pulp.

Citrate of potash 5 grains t. i. d. and citrate of iron and quinine 1½ grains, with dilute nitro-muriatic acid were given and rapid improvement resulted.

Another case resembled Pott's disease in many respects, showed weakness in sitting up and seemed to double up as though the spine were diseased and causing partial paralysis and she showed pain on being moved. This patient improved very promptly on being put on scorlutic treatment.

(TO BE CONTINUED.)

Dr. A. Leibert contributes an article on

The Filteration of Milk

which he read before the American Pediatric Society.

Mentioning the fact that milk contains many impurities, hair, dirt, etc., which are undesirable, and which sterilization would not remove, he had tried filtering. The filter chosen was absorbent cotton, and it was, as had been expected, quite effective, but to his surprise he found that the useful constituents cream, etc., were not removed at all, and not only this, but also that the number of bacteria was reduced very greatly.

A careful examination showed that if the cotton were first moistened, the number of bacteria would be reduced to about one-eighth of the number originally present.

To confirm these observations Dr. Otto Kiliam was requested to go over the same subject and he had similar results.

The experiments made are given at length and were quite conclusive.

Dr. J. L. Smith concludes his article on

The Alimentations of Young Children

giving the chemical changes taking place in lactose in milk in normal digestion, in alcoholic fermentation, as in flatulent dyspepsia and in butyric fermentation of putrefaction.

He describes the sanitary method of milking a cow and shows several points to be observed in sterilizing milk, and the injury resulting to the milk and to the infant using it if these points are not observed.

Finally he mentions the successful use in a foundling asylum of: six or eight drops of

essence of pepsin or elixir of digestive ferments, followed by one ounce each of dexterineized barley gruel and Pasteurized upper part of milk, every two hours for infants under two months of age. Every hour they are given ten drops of "Panopeptone." The upper part of milk means the upper third or half of milk that has stood for a few hours in a can.

Dr. S. A. Sutherland reports a case of

Cerebellar Tumor; Subsidence of Symptoms; Complete Recovery.

One week after a fall from a table, the patient, a boy 3½ years old, complained of headache, the pain beginning in the occiput and radiating to the vertex. The severity and frequency of attacks increased and finally violent screaming at night began. During a severe attack the head was stiffly retracted.

Double optic neuritis was found, staggering gait, and dragging of the limbs in walking, kneejerks markedly exaggerated, and in trying to grasp an object the fingers often became stiff.

An operation was not thought advisable. During the next two months the weakness increased, vomiting appeared, free epistaxis, and complete loss of power of walking and of balancing. Then improvement set in and in one year he was in almost perfect health.

The treatment was cod liver oil and iodide of potash and afterward iodide of iron, but the author thinks that the cure was a spontaneous one, due to encapsulation of a tubercular neoplasm.

This number also contains a description by Dr. Edward Pisko of a case of "Scleroderma," and an Eulogy of Drs. John M. Keating and Charles Warrington Earle, by Dr. F. Forchheimer.

JOURNAL OF GENITO-URINARY AND CUTANEOUS DISEASES.

for July. Dr. Alexander W. Stein discusses

Exfoliation of the Mucous and Sub Mucous Coat of the Bladder Preceded by Renal and Vesical Calculus.

When cases of desquamation of the urethra are mentioned they are classed under such titles as "Membranous Urethritis," etc., but the author has seen cases where there was no apparent inflammation—where the urine was normal, and which showed no symptoms of general disturbance and yet where casts of the uretha formed, projected as dry masses, and could be withdrawn without much discomfort. Both of these patients had used strong astringent injections for gonorrhœa several months before.

A few writers casually mention a croupous or diphtheritic cystitis, but that the whole mucous membrane of the bladder could exfoliate has been denied. The author has found many records of the entire mucous coat being cast off and in some instances portions of the muscular and even a part of the peritoneal covering.

The epithelial cells of the bladder have greater vitality than similar cells elsewhere, yet we can easily understand that any mucous surface severely irritated, as by the use of strong urethral injections or by the presence of ammoniacal urine might exfoliate.

It is not unusual to find, at autopsies, submucous ecchymoses in the bladder, and the loose attachment of the mucous and deeper coats explains the frequency. A slough would readily follow an ecchymosis of any great extent, and this is favored by the poor blood supply directly in the mucous coat, most of the vessels lying in the muscular layer.

"Retention of urine" is generally given as the cause of most trouble of this description, and it is more than probable that this acted by compression of the blood vessels, both venous, plexus and arteries being mainly in the region of the bas fond. In fifty cases tabulated, forty-five were women and the trouble said to be due in these to either a retroverted gravid uterus, or to the pressure of the child's head. The author then gives the history of a patient of his who after passing several phosphatic calculi had litholopaxy performed, and although greatly relieved, began some time later to pass shreds by the urethra. Some of these were quite large, and on examination they proved to be the altered mucous and submucous coats of the bladder.

The case had been complicated by what was probably pyonephrosis and after passing out of the author's observation was reported to have died of uræmia.

Dr. Eugene Fuller continues his article on

Chronic Seminal Vesiculitis

by giving a number of cases treated by him. Some of these cases were purely gonorrhœal, some purely tubercular, and some probably due to gonorrhœa in a tubercular patient, and another seemed due to excessive coitus.

As soon as a case was found to be purely tubercular the local treatment was stopped. In a mixed case great care was taken to avoid increasing the tubercular element by too great manipulation, and of course while care was taken in a purely gonorrhœal case to avoid increasing the irritation still the local treatment was the main reliance.

Concluding the article Dr. Fuller impresses the fact that by no means all chronic gonorrhœas are due to seminal vesiculitis or will be benefitted by treating those organs, and that tubercular vesiculitis is so common that it is necessary to use great care even in the rectal examination, or many cases will only be aggravated.

He goes on to state that the discharge generally ceases before the cure is complete, the treatment usually varies from a month to possibly a year, and should be applied once in five or seven days, or, if it excites inflammation, a longer period may elapse before its repetition.

In the report of the eighth annual meeting of the American Association of Genito-Urinary Surgeons there is given the discussion of Dr. Chismore's paper on a modification of Bigelow's operation for calculus.

The enormous amount of cocaine the author uses excited much interest—as much as eight ounces of a four per cent. solution had been used without unpleasant consequences.

The paper will be published later.

PERISCOPE.

IN CHARGE OF WM. E. PARKE, A.M., M. D.

MEDICINE.

Relapses of Typhoid Fever.

Dr. Hugh M. Stewart of Guy's Hospital, London, contributes an article on this subject to the March number of the *Practitioner*, founded in a great part on the clinical histories of fifty cases observed in the hospital. He thinks that so-called relapses are genuine second attacks; that they are due to re-infection (infection in a fresh part of the intestine, always at a lower situation and usually in the large intestine) from the patient's own lesions; that constipation is an important predisposing cause of relapse; that relapses occur at a certain definite period—on the average, after an apyretic interval of a little less than six days for first relapses and a little over thirteen days for second relapses; that relapses are rarely fatal; and that they heightened the patient's immunity from subsequent attacks. While, as has been said, he regards constipation as an important predisposing cause of relapses, he intimates that it ought not on that account be treated, for the reasons that the prognosis in cases of relapse is good, that the recurrence of a relapse probably confers a higher degree of immunity than a single primary attack, and that treatment of constipation may excite a dangerous degree of peristalsis. Intestinal perforation is far less common in a relapse than in an original attack, partly because the infection is less profound, owing to the partial immunity occasioned by the initial attack, and partly because the large intestine, where the lesions of the relapse are prone to be found, is thicker-walled than the small intestine. Relapses run their course more rapidly than original attacks, as regards both lesions and symptoms, and this fact gives rise to the false appearance of all the lesions being of the same duration at the necropsy.—*N. Y. Med. Journal.*

Limitations of the use of Nitroglycerine in Chronic Nephritis.

Dr. D. D. Stewart states that, in his opinion, when it is desired to employ this drug over a considerable period of time for its effects on blood-pressure, the best rule of administration is to so proportion the dose that the intervals are comparatively short—never less than four times daily—and the amount, though sufficient to produce some subjective or objective effect, never more than that just necessary to cause the slightest feeling of fullness in the head or to slightly quicken the pulse. When a rather rapid increase seems necessary to maintain a constant effect, an equally important point is to temporarily discontinue the drug for two or more days, at intervals of two or three weeks. On its resumption a smaller initial dose will be required to produce physiological effects than that last taken.—*Thera. Gazette—Maryland Med. Journal.*

Poisoning by Guaiacol.

The external application of guaiacol for the reduction of febrile conditions has been given a prominent place in recent medical journalism. It is important, therefore, to direct attention to the toxic symptoms in the first fatal case of guaiacol poisoning.

Prof. Oscar Wyss, of Zurich, reports in the *Deutsche Medicinishe Wochenschrift*, of the case of a girl nine years of age, who had been accidently given 5 c. c (75 drops) of guaiacol. In a short time she became unconscious; the conjunctivæ became injected, the corneal reflexes diminished and the pupils no longer reacted to light; there were frequent attempts at vomiting and the saliva flowed from the mouth in large quantities. The pulse became rapid, the sensibility of the skin much diminished. Finally the patient began to vomit; the physician detected the odor of guaiacol. The stomach was washed out, but she did not rally. The cyanosis gradually diminished, and instead of it a deadly pallor was observed; the respiration became frequent. Three and a half hours after the guaiacol had been swallowed the patient had 100 c. c. of brownish-red urine.

The spleen and liver soon enlarged, and the temperature fell to 35.5°C. (96°F.) and small hemorrhages were observed upon the skin of the arms and legs. The urine contained albumen, blood and casts, and Ehrlich's carbolic acid test was positive.

Jaundice soon appeared, the stupor increased and the patient died on the third day.

The autopsy revealed an acute gastritis and enteritis, parenchymatous degeneration of the liver, acute hemorrhagic nephritis, parenchymatous degeneration of the heart muscle, and ecchymoses in the pleura, peritoneum, endocardium and pericardium. The spleen was much enlarged.

Kobert in his text-book on "Intoxicationen" points out that after one gram (15 drops) doses of of guaiacol slight appearances of poisoning may supervene. These are characterized by a burning feeling in the stomach, nausea, etc. In one case in which fifteen grams, (three and two-third drachms) were accidentally taken by a patient in the Dorpat Clinic, the stomach was immediately washed out and the patient was rescued. However, unconsciousness set in, the pupils became contracted, the breathing irregular and the intensely dark appearance of the urine was very noticeable.—*Omaha Clinic.*

Blood-Serum Therapy; Its Evolution and Present Status.

Dr. Carl Gunther (*Deutsch. Med. Wochenschr.*) The author gives a concise review of the blood-serum treatment and the princi-

ples which, at different times, were thought to control its action. The treatment depends upon the idea that the blood-serum of individuals who have artificially been made immune against a certain infectious disease, if introduced into the body of another individual, will develop healing properties or cause immunity from the disease in that person. Gunther describes the different processes by which the cultures can be weakened before being used for injections, and the different hypotheses as regards their action in the body, such as the hypothesis of retention and the theory of phagocytosis. He also mentions the destructive properties which blood-serum itself has on certain bacteria. The serum to be used in treatment can be preserved by the addition of ½ per cent. of carbolic acid. Nothing definite is as yet known about the chemical substances present in the serum.—*American Medico-Surg. Bulletin.*

Severe Hiccough.

Heidenhain (*Berl. klin. Woch.*, June) remarks that this clonic convulsion of the diaphragm may be caused by direct or reflex irritation of the phrenic nerves. Reflex hiccough may be produced by diseases of the peritoneum, stomach, etc. Sometimes it is due to severe cerebral disease. It is observed before death from malignant disease of the intestine. A patient, aged 72, had a severe attack of hiccough five years ago, lasting five days, for which no cause could be found. In the present attack cocaine was given, with the best results, after other remedies had entirely failed. A few days after the attack all the symptoms of intestinal obstruction, including fæcal vomiting, appeared. Abdominal section was performed, and a large mass of growth was found arising from the tail of the pancreas, and surrounding the large intestine. An artificial anus was formed, but the patient soon died. In this case the patient seemed to be in the best of health until he had a slight attack of bronchitis. Five days later the hiccough supervened, and lasted eleven days. Seven days after the cessation of the hiccough intestinal obstruction manifested itself. The author thinks that the hiccough was the precursor of death from intestinal carcinoma. This disease could not, of course, account for the attack five years previously. Attention is drawn to the value of cocaine in this affection.—*British Med. Jour.*

Diagnosis of Appendicitis.

Edebohls (*Amer. Jl. Med. Sc.*) states that as a rule he has found it possible to palpate the vermiform appendix when not diseased, and in chronic inflammation to recognize distinctly the thickened appendix. He thinks that operation should not be undertaken in chronic cases unless the diseased appendix can be felt, nor in acute cases unless either the diseased appendix or the presence of a tumor can be detected. In acute appendicitis it may only be possible to localize precisely the appendix after anæsthesia, but information of much value as a guide to the point of incision may then be obtained. In searching for the appendix, the patient's knees are flexed slightly, and the fingers of the right hand are placed on the abdomen near the umbilicus. The fingers are then drawn from the umbilicus to the anterior superior iliac spine, firm pressure being exerted so that the resistant posterior abdominal wall and the pelvic brim can be perceived distinctly. The appendix is felt as a flattened ribbon-shaped structure when normal, as a more or less rounded and firm organ when thickened by past or present inflammation. The normal appendix exhibits no special sensitiveness, but when inflamed is more or less tender. The origin of the appendix lies generally an inch or half an inch outside the iliac artery, so that the line of the vessel (from the left of the umbilicus to the middle of Poupart's ligament) forms a useful guide to the appendix. Edebohl's observations were nearly all made in women. He found the cæcum empty in nearly every person examined. He has tested his method by observations made during laparotomy, in cases of both normal and inflamed appendix. —*British Med. Journal.*

Hypodermic Injections of Nuclein.

Dr. Victor C. Vaughan, who in common with other investigators has been testing the efficacy of the hypodermic injection of nuclein solutions in pneumonia, tuberculosis, etc., records his results in the *Journal of the American Medical Association*, as follows:

1. The subcutaneous injection of nuclein increases the number of white blood corpuscles.

2. This increase occurs in both healthy and tuberculous persons.

3. With like quantities of nuclein injected, the increase varies with the person. It may be slight, and it may be three-fold.

4. This increase occurs principally in the polynuclear cells.

It is evident as a rule as soon as the third hour after treatment and generally disappears after the forty-eighth hour.

If the nuclein shall prove of any value in the treatment of tuberculosis, it will most probably be due to the fact that they increase the polynuclear white corpuscles.

I have been using nuclein in the treatment of tuberculosis in man since May 1, 1893. At first I employed only yeast nuclein, but now I am using spleen nuclein in some cases. When sufficient evidence has been obtained either to reject or recommend the treatment, the results will be communicated to the profession. I may say, however, that only in initial cases may we expect any benefit, and even in regard to these I must have more abundant material and a longer experience before I can speak with any certainty.

Motion of Human Spermatozoa.

Various authorities state that the spermatozoa may continue to move during twenty-four to eighty four hours after death in the fluids of the seminal tract. Outside the body the movement of spermatozoa has been observed for seventy two hours by Hofmann and Mantegazza for four days at a suitable temperature. Mr. Piersoll now states that at a temperature of 8.5° C. a few of the elements showed movement, after being kept for nine days. These facts show that spermatozoa may long retain their vitality in the female generative tract and must receive in future due consideration in connection with certain medico-legal questions.—*Med. Rec.*

Electricity in Amenorrhœa.

Panecki (*Therap. Monatsh.*,) has found electricity, and particularly the faradic current, the most successful means of dealing with amenorrhœa. It is necessary that the poles should be introduced into the uterus and be allowed to act there. This treatment is well borne, and the current can be increased at each sitting, the number of the latter required averaging from five to thirty, and their duration five to fifteen minutes during successive days. The author's experience includes 18 cases in which the cure of the condition was established a year or more ago, the patients still remaining well. One of these, a married woman aged 31, had never menstruated though she was subject to periodical affections (severe headache, etc.) The treatment on various lines had extended over six years, but with absolutely no success. The author at the expiration of one of these periods commenced the application of the faradic current, and after twenty-eight successive sittings a small flow became apparent. During the following interval six more applications were made, and the patient is now well and relieved of all symptoms.—*British Med. Jour.*

Treatment of Mumps.

Dr. A. Martin (*Sem. Med.*). During a recent epidemic of mumps among soldiers, the author successfully resorted to the following treatment:

From the outset, he instituted buccal antisepsis, which, when rigorously done, according to his observations, diminishes the chances of testicular complication. He therefore had his patients gargle and cleanse the mouth as often as possible with solutions of thymol, carbolic acid, or very hot 4 per cent. boric-acid solution.

Besides, during the first days of the disease he administered antipyrine in daily doses of 2-3 grammes (30 45 grn.). This, he states, more rapidly effects the resolution of the inflammatory process than do sodium salicylate and other remedies; moreover, it acts more promptly on the fever and pain.

In orchitis caused by mumps, pilocarpine subcutaneously in doses of 1 centigramme (1-6 grn.) repeated once daily, is said to have promptly diminished the pain from the first evening on, and to have lowered the temperature, which became normal on the third day. The swelling of the testicle disappeared between the eighth and tenth days. After the acute period of orchitis was passed, the patient was submitted to a tonic treatment (cod-liver oil, nux vomica, cinchona extract, meat-powder, sulphur baths, etc.) for the purpose of preventing testicular atrophy.—*A. M. S. Bull.*

The Influence of Alcohol, Glycerine and Olive Oil on the Action of Disinfectants.

Lenti summarizes in the *British Medical Journal* the results of a series of researches as follows: (1) Alcohol in the absence of water neutralizes all bactericidal power on the part of sublimate or phenol with regard to anthrax spores, and the bactericidal action is not exercised until the dilution of the alcohol with water becomes greater than two per cent. in the case of 1 in 1000 sublimate solution, or than seventy per cent. in the case of carbolic acid. The length of time to which the spores were subjected to the action of the solution was twenty-four hours in the case of sublimate, and forty-eight hours in that phenol. (2) Glycerine has a similar impeding action, interfering with the action even of a 2 in 1000 solution of sublimate, if the proportion of water be less than forty per cent. In the case of phenol it is still more manifest. (3) Phenol and lysol dissolved in olive oil have no disinfectant action when tested as above. (4) In the preparation of a disinfecting fluid one ought, therefore, to avoid the addition either of alcohol, glycerine or fats.

SURGERY.

Trephining for Headache.

At a meeting of the New York County Medical Association held June 18th, Dr. J. Marshal Hawkes presented a patient, a young man, whom he had trephined for persistent localized headache. In Starr's recent work on "Brain Surgery," Dr. Hawkes said it was stated that this operation had been performed but twice for the purpose in question, once in London, and once in New York, by Dr. Robert F. Weir. From early boyhood this patient had suffered intolerably from frontal headache, and though he had consulted a large number of physicians, every remedy that had been tried had utterly failed to give him relief Thinking that the trouble might possibly be due to eye strain, Dr. Hawkes first sent him to Dr. Knapp, but the latter found that there was no difficulty of this kind. On making an examination of the head, the only abnormality that could be detected was a slight indentation of the bone in the right frontal region. As a last resource, Dr. Hawkes determined to trephine at this spot, and on June 30, 1892, a button of bone, about

two-thirds of an inch was removed under strict antiseptic precautions. It was found that in the location named there was a depression of the inner table of the cranial bone, making pressure upon the brain substance, and the button removed was exhibited to the Association. From the time of the operation there had been complete relief from the headache, and as two years had now elapsed, the cure could be pronounced permanent.—*Boston Med. and Surg. Jour.*

Shortening the Round Ligaments.

Kellogg (*Mod. Med.*) has used this operation in over 300 cases in which the uterine appendages had been previously removed. Comparing it with the operation of ventral fixation, he finds its advantages to be as follows:—It supports the organ in a natural way, the traction falling upon the parts accustomed to it and able to bear it, being closely connected with the bony walls of the pelvis, instead of upon the yielding structures at the median line The operation is a safe one; the mortality is nothing. The operation involves no mutilation, no conspicuous cicatrix, no considerable amount of suffering, and has nothing about it of a frightful or repulsive nature. The time required for the operation, when a proper method is employed, is only five to fifteen minutes, according to the skill and experience of the operator, so that the patient is but a short time under the influence of the anæsthetic, involving very little risk of fatal consequences from this cause.

The failures have been less than five per cent. and were not due to any defect in the operation, but to the patient not undergoing the necessary treatment to remove the primary causes of retroversion.

The Bloodless Gradual Dissection Method of Amputation at the Hip Joint.

Dr. W. L. Estes has employed the following method in seven cases, with but one death, and considers it especially adapted to cases which necessitate very short flaps.

The first step in the operation is, by means of an Esmarch bandage, or by elevating the extremity, to force all the blood out, unless the extremity has been so crushed that this is impossible. Secondly, the femoral vessels are tied by double ligatures at Poupart's ligament, and the vessels divided between the ligatures. The rubber band may now be removed. Third, an anterior flap is gradually dissected up from without inward. Great care is taken to secure all known vessels before they are cut, by means of double ligatures or two hemostatic forceps, and all muscular or small branches when cut must immediately be secured. After the capsule is reached anteriorly, the posterior flap is dissected up with the same care as to securing the blood vessels. Finally the capsule is incised and disarticulation is accomplished after the usual methods. The essential feature of the operation is the securing of each vessel before it is cut or immediately after being cut. There is usually no difficulty in securing any vessel except the profunda and internal circumflex arteries. There is no oozing to speak of after this operation, and this feature makes it particularly valuable in very weakened or exhausted cases.

In none of these operations, except the second one and the one before the last, was there more than an ounce of blood lost, and on this account the author calls it the bloodless gradual dissection method.—*N. Y. Polyclinic.*

The Use and Abuse of the Bandage.

T. H. Manley, M. D., in the *Medical Summary:*

As a purely mechanical means of support in infantile or juvenile hernia, a bandage with the aid of a soft muslin pad is of more value as a therapeutic measure of relief and cure, when no complications are present, than any truss that ever was invented or operation devised. In pendulous, flabby abdomens, which permit of a constant strain on the mesenteric ligaments, or those produced by the gravid uterus, kidney or liver, great relief is experienced by the employment of the broad bandage or girth.

The first abuse of the bandage comes through its clumsy, unskilled application, by the inexperienced, hasty or careless. The second, through its too firm adjustment, when the circulation is impeded or as sometimes happens, it is totally strangulated, the tissues beyond becoming asphyxiated, mortified and destroyed. This latter, occurs most commonly, in cases of fracture. As many as five or six such cases have come under my observation in my time, and I have been informed of others, in which the bandage got in its deadly work, though they were frequently entered in the hospital-records as cases of "acute mortification." A fractured limb, which is at all firmly bandaged, should be closely watched, for the first twenty hours; until, in fact, the subsidence of primary inflammation and swelling and the bandage relaxes its grip. It often becomes a matter of great difficulty, to permanently adjust, widely separated fragments, without risking a firm bandage to fix them. These difficulties and dangers could be largely obviated if we would go back to the practice of our fathers; and, carefully adjusting the fracture leave it alone and not permanently "set" it until primary swelling has subsided.—*N. W. Lancet.*

Too Protracted Use of the Bandage.

We daily witness the weakening and atrophic muscular changes which a bandage may produce in that fashionable thoracic girth, commonly known as a "stays" or corset. The maternal binder after parturition, gives great comfort to the bruised, strained, fatigued abdominal muscles, but when too tightly applied or worn too long is

capable of doing mischief. We must then use discrimination, skill and judgment with the roller if we would derive the greatest good from it and avoid the unpleasant consequences to our patients or ourselves, which may attend its injudicious employment.

This is an age when almost nothing takes, if it does not smack of originality. The profession daily hungers and craves for something new; it must have a new coloring or be presented in a new dress, and it is greedily devoured, without our even hesitating for a moment, to determine for ourselves, whether it consists of anything more than a revamped, stale old shell, which may disorder and clog rather than impart vitality or energy.—*N. W. Lancet.*

Treatment of Gonorrhœa.

Dr. Edward Martin, of Philadelphia, after investigating different remedies and methods of treatment of gonorrhœa in a large number of cases, says: Concerning the conclusions which this series of observations seemed to justify, the following is a *resume:*

1. The abortive treatment of gonorrhœa by means of a ten-per-cent solution of nitrate of silver injections applied to the navicular fossa is advisable when the disease is seen in its earliest stage, that is, when inflammatory phenomena are absent, and when the symptoms consist in the slight, whitish discharge and tickling or moderate burning on urination, and when microscopic examination of the discharge shows that it is made up mainly of mucus and epithelium containing little pus. This abortive treatment is successful in an uncertain percentage of cases. When it fails it does not materially complicate the subsequent course of gonorrhœa.

2. When gonorrhœa is first seen in its florid stage, in addition to ordering rest, light diet, regular evacuation of the bowels, free drinking of plain waters, hot baths on retiring, alkaline diuretics, and the treatment appropriate to ardor urinæ and chordee, balsams should be given in full doses, and mild antiseptic irrigations or injections should be practiced at once. The most efficient balsams are sandal-wood and copaiba. These should not be pushed to the point of disordering the stomach.

He uses capsules, each containing:

℞ Balsam copaiba, Oil sandal-wood, āā..... m v.
Oil cinnamon..... mj.

Of these he gives six to twelve per day, administering them one hour after meals.

3. Irrigation of the urethra by means of hot antiseptic lotions gives better results than any other treatment. These should be continued either once or twice a day until gonococci disappear from the discharge or from the clap shreds found in the urine. They should be displaced by astringent injections.

4. When irrigations can not be employed, even during the florid stage, injections are indicated; these should be of bichloride of mercury 1 to 20,000 or nitrate of silver 1 to 10,000. These injections should be gradually strengthened as urethral tolerance is established.

5. Injections of nitrate of silver, 1 to 3,000, or bichloride of mercury, 1 to 1,000, or injection Brow, or any of the formulæ customarily used in practice in the increasing or florid stage of gonorrhœa, distinctly predispose to the development of hyperacute posterior urethritis, epididymitis, and other complications of gonorrhœa, and may aggravate and prolong urethral inflammation. Strong astringent injections employed in the early period of the subsiding stage are equally dangerous.

6. Treatment by internal medication alone is followed by a small percentage of epididymitis and posterior urethritis, but by slow cure. The most efficient treatment consists in the combination of the balsams with local antiseptic washings.—*Therapeutic Gazette.*

Etioloy, Pathology and Treatment of Carbuncle.

Dr. D. W. Graham, of Chicago (*The Journal Am. Med. Ass'n*), in dealing with this important subject, holds that it is in all cases a local disease, and due to micro-organism. The one generally found is the staphylococcus aureus. Sometimes the staphylococcus albus is also found. The coccus may enter through the hair follicles, sweat-glands, sabaceous gland ducts, or abrasions of the skin. The most that a cachectic condition of the body can do by way of etiology is to increase the vulnerability of the tissues. It is also a disease of middle life.

In its anatomy and pathology, it is related to osteo myelitis, parenchymatous abscess furuncle, and acute abscess. The differences in the clinical history and the methods of termination in the diseases of this group are due to the anatomic structure of the region or organ affected. The region frequently affected by carbuncle is the dense, firm, fibrous tissue over the posterior median line of the body. A true typical carbuncle can only happen in such parts of the body as permit of continued surgical tension in the inflamed tissues.

As to the treatment, the writer admits that much good may be done by making an incision into the inflamed part, or by the usual crucial incision. Parker's method of scraping out the inflamed tissue is a good plan. The injection of antiseptics into the swelling cannot be relied upon. The author's plan is to make a crucial incision over the tumour to points just beyond the diseased portion. The integument is raised, and the indurated tissue is then carefully dissected out. The wound is then dressed with some antiseptic. There is very little hemorrhage, and the wound heals rapidly without loss of integument, when the operation is done early.

Excoriations in Children.

In the *Progrès Médical*, No. 16, 1894, the following is also recommended:

Carbolic acid	(grs. xlv)	3.0
Powdered boric acid	(℥iv)	15.0
Powdered alum	(℥iv)	15.0
Precipitated carbonate chalk	(℥ivss)	150 0
Starch	(℥viij)	250.0

—*Pritchard.*

ANATOMY.

Landmarks of the Digestive Tract.

Dr. F. B. Robinson (*Mathews' Medical Quarterly*) says:

1. The sigmoid flexure is a very apt location for disease to arise. In dissecting infant cadavers I find the sigmoid very long and often lying in the right iliac fossa. In one infant, about six months old, I found a volvulus of the enormous sigmoid. The sigmoid and rectum are inseparable. In the sigmoid 60 per cent. of volvulus occur, and men have volvulus four times as often as women. I was unable to produce a permanent volvulus in experimental work on dogs' bowels. When I stitched it the volvulus would unwind and tear out the stitches or lengthen the pedicle. The cause of volvulus is (*a*) fatless, (*b*) elongated mesentery, and (*c*) a history of constipation.

The peculiar disease to which the sigmoid is liable is stricture (malignant or non-malignant). Seventy per cent. of strictures of the large bowel occur in the descending colon; and this would give a large number to the sigmoid, as the sigmoid is some fifteen inches long, and the descending colon proper is only eight inches long. No doubt the frequent stricture of the sigmoid is due to (*a*) the sharp and hard foreign bodies which lie on the sur face of hard fæces, and (*b*) the mechanical d ifficulty of passing through the long, curved gut. A curious feature about man is the sigmoid curve and the rectal ampulla, which must represent some ancient evolutionary stage. A peculiar feature I have long noted in autopsies is that the sigmoid and descending colon are frequently more contracted than the other portions of the large bowel.

2. The splenic flexure of the colon is peculiar from being the most fixed and most acute flexure of the digestive tract. It is held firmly in position by the costo-colic ligament. The sharpness of the bend in the colon at the spleen offers considerable mechanical difficulties to the passage of hard fæces, and this accounts both for malignant and non-malignant strictures at this point.

Rough hard fæces wound the mucous membrane and allow infection to travel through the gut-wall into the peritoneum, and this wound being kept constantly irritated results in inflammation or malignant growths. The inflammatory products organize into connective tissue, ending in contraction or stricture. Tumors and strictures are difficult to diagnose in the splenic flexure, as they are very high under the ribs, and in laparotomy for intestinal obstruction are often overlooked.

3. The hepatic flexure does not give rise to much intestinal disease. It is not an acute flexure, but possesses a very large angle. Its main difficulty is that it is near the gall bladder, which frequently gives rise to inflammation, and it spreads to the hepatic flexure. It is held to the liver by the hepato-colic ligament. Besides being an obtuse flexure, the fæces are not so solid as they are in the splenic and sigmoid flexures.—*American Lancet.*

BACTERIOLOGY.

Microbicide Properties of Mucus.

The presence of vast numbers of microbes in those cavities of the body which are in communication with the air would doubtless be the occasion for frequent and fatal attacks of illness were it not for the fact that the mucus which covers these exposed surfaces is possessed of distinct bactericide properties. Even germs as virulent and tenacious of life as are the spores of the anthrax, have been found to be killed after a few hours of exposure to nasal mucus. This product of gland-action is found to be capable of destroying all kinds of microbes. It is this protective action of mucus which prevents an enormous development of bacteria in the nose and other cavities of the body which are exposed to the air. This fact emphasizes the importance of preserving intact the much-neglected nasal mucous membrane, since it is evident that a state of disease capable of destroying the mucous glands, and hence vitiating the mucous secretion or causing its entire loss, must expose the body to attacks of disease from which it might otherwise escape.—*Modern Medicine.*

PHYSIOLOGY.

The Effects of Smoking Upon Muscular Work.

Prof. Vaughn Harley, M. D., M. C. P. and Grover Research Scholar, publishes in a recent number of the *Journal of Physiology*, the results of an extended series of experiments in relation to causes which influence muscular work. Among the various experiments undertaken by Prof. Harley, some of the most interesting relate to the influence of tobacco-smoking upon muscular work. The idea is generally prevalent among smokers that a larger amount of work can be accomplished under the influence of tobacco than without it,—at any rate, that smoking, even if it does not increase muscular power, lessens the sense of fatigue, and thus enables the individual to continue working longer than he otherwise could do. Prof. Harley's experiments had relation to two points:

1. The amount of work which could be accomplished; and—

2. The length of time during which work could be performed before the point of abso-

lute fatigue, with inability to continue work, was reached.

He found, as the result of his experiments, that even moderate smoking in a person accustomed to smoking so that the primary toxic effects of the nicotine were eliminated, the amount of work which could be accomplished was not increased, and that the approach of fatigue was not retarded. Tobacco-smoking, on the contrary, to use the words of Prof. Harley, "slightly diminishes muscular power and hastens the onset of fatigue."

GYNECOLOGY.

Intra-Uterine Electro-Therapeutics.

Intra-uterine electro-therapeutics (galvanism, faradism, or the sinusoidal current) skillfully, and patiently applied, deserves to remain at the head of gynecological conservative therapeutics.

1. Because it produces as a rule a symptomatic improvement which is oftentimes nearly equal to a cure. This is seen in its action on endometritis and the principal functional troubles. It is wonderfully efficacious in non-cystic tumors. It is often though not always useful in non suppurative peri uterine inflammation. It is useless in cystic collections of any kind whatever and in suppurative pelvic lesions.

2. In cases where it is of no value as a curative agent it may be of the greatest help in clearing up a doubtful diagnosis and settling the question as to whether or not an operation is desirable.

3 If its action is favorable, it frequently gives to sterile women the ability to conceive and bear children. In this connection electro-therapeutics is not hostile to surgery but on the contrary is a most important adjuvant to it, by pointing out clearly the indications for operation and also by completing what the latter has begun, but is not always able to finish—the entire restoration of the patient to health.—Dr. Apostoli in *Trans.-Journal of Electro-Therapeutics.*

CLIMATOLOGY.

The Physiological Effects of Mountain Climates.

Dr. C. T. Williams (London *Lancet*) says: The physiological effects of mountain climates, as shown on healthy or sick persons ascending from the lowlands, are briefly the following: The skin is tanned by the solar rays, and especially by the ultra-violet rays (Bowles); the circulation is at first quickened and the heart's impulse increased in power, but at the end of six or eight weeks the pulse rate becomes less rapid, and it eventually is slower than normal. Respiration is at first quickened, but coinciding with the pulse-rate becomes slower and also falls below the normal, the inspirations being deeper and the expirations (Ruedi) more complete. The quickening of the circulation and respiration is accompanied by thirst, by a reduction in the urea excreted by the kidneys but more carbonic acid (Marcet) and water are eliminated from the lungs, as might be expected from more oxygen being inhaled. Later, when acclimatization is complete, the normal amount of urea is again excreted, and the blood pressure increases. Coincidently with the slowing of the respiration, there is an extension of the thorax in several directions, causing an increase of the circumference measurements of from one to three inches, with increased mobility of the chest walls. All this points to greater physiological activity of the pulmonary organs, from the necessities of a rarefied atmosphere leading to greater development, and it must be noted that all mountain races have large and deep chests and are able to march great distances and to climb mountains with comparative ease. The effect of high altitude climates on healthy persons is excellent, and on most forms of phthisis it has been shown by my statistics to far surpass in results any other set of climatic agents. At the same time this is a two-edged weapon, and in many cases of disease, such as those of the heart, liver, and brain, and in emphysema and bronchitis, as well as in the case of the aged and of those with weakly constitutions, it must be avoided as most harmful. Finally, mountains are highly to be recommended as play-grounds for the mentally tired workers and for the young, who can rest their brains and work their muscles, and by inhaling pure, aseptic air may renew health and vigor and return to their duties refreshed as well as recreated.—*American Lancet.*

ARMY AND NAVY.

CHANGES IN THE U. S. ARMY FROM JULY 15, 1894, to JULY 28, 1894.

Leave of absence for two months is granted Captain Richard W. Johnson, Assistant Surgeon U. S. Army.

The leave of absence on surgeon's certificate of disability, granted First Lieutenant Frank T. Meriwether, Assistant Surgeon, is extended two months on surgeon's certificate of disability.

By direction of the Secretary of War, the order assigning Captain George McCreery, Assistant Surgeon, to duty at Fort Washakie, Wyoming, is revoked.

By direction of the Secretary of War, the order assigning Major Curtis E Price, Surgeon, to duty at Fort Custer, Montana, is revoked, and he is granted leave of absence for one month to take effect, upon being relieved from duty at Fort Porter, New York.

CHANGES IN THE U. S. MARINE HOSPITAL SERVICE, FOR THE FOUR WEEKS ENDING JULY 21st, 1894.

Carmichael, D. A., Passed Assistant Surgeon; Granted leave of absence for thirty days, July 20, 1894.

Glennan, A. H., Passed Assistant Surgeon; to inspect unserviceable property, at Delaware Breakwater Quarantine, July 6, 1894

Bratton, W. D., Passed Assistant Surgeon; to report at Bureau for temporary duty, June 27, 1894.

Kinyoun, J. J., Passed Assistant Surgeon; to proceed to Cape Charles Quarantine, for special temporary duty, June 30, 1894; designated to represent Department at International Congress of Hygiene and Demography, July 9, 1894; to inspect unserviceable property at Boston, Mass., July 17, 1894.

Geddings, H. D., Passed Assistant Surgeon; to report at Bureau for temporary duty July 20, 1894.

Wertenbaker, C. P., Passed Assistant Surgeon; to proceed to Delaware Breakwater Quarantine for special temporary duty, June 30, 1894.

Young, G. B., Passed Assistant Surgeon; to inspect Quarantine Stations, July 20, 1894.

PROMOTION.

B. W. Brown, Assistant Surgeon, commissioned as Passed Assistant Surgeon, July 19, 1894.

NEWS AND MISCELLANY.

State Board of Medical Examiners of New Jersey.

A. K. Baldwin, M. D., president; Wm. Perry Watson, M D., Secretary; A. H. Worthington, M. D., treasurer.

Wm. L Newell, M. D., Millville, examiner in Materia Medica and Therapeutics.

F. B. Lane, M. D., East Orange, examiner in Chemistry, and in Eclectic Materia Medica and Therapeutics.

Wm Perry Watson, M. D., Jersey City, examiner in Practice of Medicine, including diseases of the skin, nose and throat.

A. K. Baldwin, M. D., Newark, examiner in surgery, including surgical anatomy and diseases of the eye, ear and genito-urinary organs

A. Uebelacker, M. D., Morristown, examiner in anatomy.

E. L. B. Godfrey, M. D., Camden, examiner in Obstetrics and Gynecology.

Edwin DeBaun, M. D., Passaic, examiner in Physiology.

G. F. Wilbur, M. D., Asbury Park, examiner in Histology, Pathology and Bacteriology.

A. H. Worthington, M. D., Trenton, examiner in Hygiene and Medical Jurisprudence, and in Homœpathic Matera Medica and Therapeutics.

REQUIREMENTS FOR LICENSE TO PRACTICE MEDICINE AND SURGERY IN THE STATE OF NEW JERSEY. 1894-95.

All requirements for admission should be completed at least two weeks before examination.

They are as follows:

1. Evidence that applicant is more than 21 years of age.

2. Certificates of moral character from not less than two physicians in good standing, one of whom must be a resident of this State.

3. Candidates must be graduates from an accredited literary or scientific college, or have completed satisfactorily not less than a three years course in an a accredited high school or academy, or have received a preparatory education covering the following branches, viz: Orthography, arithmetic, English grammar and composition, geography, history of the United States, algebra and physics, as certified by the State Superintendent of Public Instruction of New Jersey.

4. Candidates must have "received a diploma conferring the degree of doctor of medicine from some legally-incorporated medical college (which in the opinion of said board was in good standing at time of issuing said diploma) in the United States, or a diploma or license conferring the full right to practice all the branches of medicine and surgery in some foreign country, and has also studied medicine four years, including three courses of lectures in different years in some legally incorporated American or foreign medical college or colleges prior to the granting of said diploma or foreign license; provided, however, that two courses of medial lectures, both of which shall be either begun or completed within the same calender year, shall not be considered to satisfy the above requirements."

First Exemption: Evidence of one year's service "as a member of the resident medical staff of any legally-incorporated charitable or municipal hospital or asylum" or of five or more years reputable practice of medicine and surgery may be accepted as equivalent to one year's study of medicine and surgery.

5. "All examinations shall be written in the English language, and the questions and answers shall be, except in materia medica and therapeutics, such as can be answered in common by all schools of practice; if the applicant intends to practice homeœpathy or electicism, the members of said board of those schools respectfully shall examine said applicant in the materia medica and therapeutics of the school in which such applicant intends to practice; the examinations shall be in the following subjects, namely, (Sec. 1.) materia medica and therapeutics; (Sec. 2.) obstetrics and gynecology; (Sec. 3.) practice of medicine, including diseases of the skin, nose and throat; (Sec. 4.) surgery, including surgical anatomy and diseases of the eye, ear and genito-urinary organs; (Sec. 5.) anatomy; (Sec. 6.) physiology; (Sec. 7.) chemistry; (Sec. 8.) histology; pathology; bacteriology; (Sec. 9.) hygiene; medical jurisprudence."

Second Exemption: "Applicants examined and licensed by or who are or have been members of state examining and licensing boards of other states, upon the payment of fifty dollars to the treasurer of said board and on filing with the secretary of said board a copy of his or her license or certificate, certified by the affidavit of the president and sceretary of such board, showing also that the standard of requirements of said board at the time of said license or certificate was issued was substantly the same as that required by said board, and of his or her affidavit as to the personality thereof, may be granted a license by said board without further examination thereby."

THE

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ORIGINAL ARTICLES.

COMBINED MOTOR AND PSYCHICAL EPILEPSY; REPORT OF A CASE.

WILLIAM PHILIP SPRATLING, M. D.,* New York.

Our constantly increasing knowledge of epilepsy is causing us to construct a more elaborate classification of the forms of this disease. Up to within a comparatively recent period we were satisfied with the simple division of epilepsy into *Grand Mal* and *Petit Mal;* a designation at once simple and classical.

In 1877, Weisse recognized and described a condition that he termed psychic epilepsy. His description of the new type was based on the observation of four cases.

In psychic epilepsy we recognized a special form of the disease, running a typical course, and in which the convulsive attacks were replaced by peculiar psychoses which bore no relation to convulsions of the ordinary kind. In psychical epilepsy or the psychical epileptic equivalent, as it is frequently termed, there is a peculiar condition of transferred or perverted consciousness, if I may so characterize it. The unconsciousness that usually follows attacks of *Grand Mal* or *Petit Mal*, is not present, yet normal consciousness is seriously interfered with. Those who regard the loss of consciousness as the essential feature of epilepsy will experience great difficulty in properly classifying the psychical form of that disease. More than that they would hesitate to even accept it as a distinct type of epilepsy.

The chief distinction, however, (accepting the involuntary nervous discharge from the cortex as the cause of epileptic phenomena) lies in the fact that in psychical epilepsy those areas which preside over the higher conscious actions of the mind are chiefly involved; while in ordinary epilepsy those areas that preside over motor functions suffer most.

In the first instance, the areas that preside over the higher conscious actions of the mind suffer in varying degrees. The shock that disturbs them may be so slight as to cause only momentary unconsciousness without convulsive symptoms of any kind whatever; or, the shock may be so severe as to be felt by adjacent areas and so give rise to much more marked symptoms. Acute maniacal manifestations even may mark the psychial explosion.

Psychial epilepsy is similar in some respects to *Petit Mal;* the chief points of similarity being the brief duration of the two diseases, and the momentary unconsciousness that is common to them both.

A notable difference between them lies in the fact that *Petit Mal* is frequently preceded by an aura of some kind, while psychical epilepsy is not preceded by permonitory symptoms of any kind whatever. Moreover, *Petit Mal* is a common disorder, while psychial epilepsy is rare.

Dr. M. Allen Starr relates the case of a man who suffered first from attacks of *Grand Mal*, and then from psychial epilepsy. Attacks of the following kind occurred almost daily. "While the patient is walking, reading, talking, or at his

*Formerly First Assistant Physician, N. J. State Hospital at Morris Plains; Member New York County Medical Society; Member Harlem Medical Association of the City of New York.

professional work, he will suddenly cease what he is about, and his face will assume a broad grin for about ten seconds, then he looks about in an absent-minded way, and immediately resumes his occupation. At these times there is no apparent loss of consciousness; he never staggers if standing, nor lets anything drop which he is holding; but when questioned as to what has amused him, he has no recollection of being amused, or any notion that anything unusual has occurred."

"These attacks," Dr. Starr adds, "are undoubtedly of the nature of *Petit Mal*, but the fact of the change of mental expression seems to indicate that when they occur, there is present a second state of consciousness in which the patient perceives something funny; just as in the maniacal conditions there is a second state of consciousness in which the mind is excited by frightful perceptions and notions."

The case which I have to report is that of W. H., a sailor, fifty years of age, who came under my observation in February last. He has had epileptic attacks since he was twenty-five years old. He is well-built, vigorous and active, and manifests no evidence of mental deterioration as the result of having suffered from epilepsy for twenty-five years. The patient cannot recall that any of his immediate ancestors suffered as he does, or that any of them were ever insane.

He has never received an injury of any consequence, on the head. His skull is entirely free from indentations, and the scalp shows no scars. About the time of the first attack he indulged moderately in alcoholic drinks. He admits specific infection, which occurred prior to the first convulsion; though all evidences of syphilis are lacking at this time.

The first attack came on twenty-five years ago, and was very severe. It came on during the night. Twenty-four hours after the first attack he had another more severe than the first. This was followed by post-epileptic mania that lasted some hours. A period of several months passed after this in which he had no attack. Then a mild one occurred during the night.

During the following twenty years he continued to suffer at long intervals; many months often intervening between the attacks. He noticed during this time that the attacks were far less frequent while he was at sea, than when he was on shore. He mentions especially one cruise that lasted a year, during which time he did not have a convulsion. In less than twelve hours after going on shore he had a violent seizure. The radical change in his manner of living, change of diet, and indulgence in certain excesses, undoubtedly caused a recurrence of the trouble.

Up to five years ago, he had attacks of *Grand Mal* only; and they were always nocturnal. At that time he began to experience seizures of entirely a new kind. These always came on during the day, and partook of a psychical nature from the first. During the past five years he has had almost daily an attack similar to the following. When reading, writing, walking, or engaged in any form of light employment he will suddenly stop what he is doing, and if walking will turn half around; appear dazed and confused; partly extend his hands like a person groping in the dark, his face wearing all the while a completely changed expression. He does not fall or even stagger; makes no noise or outcry of any kind; there is no change in the color of his face, and no change in the condition of the pupils. This condition lasts from five to seven seconds, and passes away as quickly and as suddenly as it came. He knows nothing of it afterwards, and denies that he has acted strangely.

His expression often assumes a frightened and apprehensive look during the brief seizures. If the attack comes on while he is at the table eating, he suddenly stops using his knife and fork, stops masticating his food, his face takes on a changed expression, and then he suddenly begins eating as before, totally unconscious of what has occurred. He has never had an aura of any kind, and it is a singular fact that the epileptic who suffers from the psychical type of that disease enjoys immunity in that respect.

This patient often experiences as many as three seizures in twenty-four hours. In addition to the psychial attacks, which are always diurnal, he continues to suffer from violent attacks of *Grand Mal*, which are always nocturnal.

Recently he has manifested very positive symptoms of post-epileptic mania. This condition comes after each seizure, and usually lasts from three to four hours.

As to treatment there is but little to be said. The medical treatment of his case was as unsatisfactory as it is in the vast majority of epileptics. Liberal doses of bromide of potassium, in combination with choloral hydrate, given at nine o'clock in the evening, lessened the force and violence of the night explosions more than any other remedy.

The most important part of the treatment in his case, however, consists in the most rigid and careful supervision of his diet. Indulgence in indigestible foods and alcholic drinks, always increased the frequency and violence of his convulsions.

COMMUNICATIONS.

OVARIAN SARCOMA; DISPLACED KIDNEY; ECTOPIC GESTATION*

E. E. MONTGOMERY, M. D.†

GENTLEMEN: The patient I bring before you to-day is 23 years of age; puberty occurred at 14; menstruation was regular though attended with pain, particularly during the last twelve months. She is married and has no children. For the last year she has been complaining of severe pain in the right iliac region during menstruation, but was not aware of any enlargement of the abdomen until her attention was called to it by her mother and a physician, who told her she had a tumor. Her general condition was good until two months since. She has been suffering from constant pain, unable to sleep without anodynes, for the last month slept sitting up in bed, which increased the tension of the abdominal wall, but decreased the pain. She has been in the ward a few days. The abdomen, as you see, is considerably enlarged. Palpation, even when carefully practiced, is attended with a great deal of pain and discomfort. There is a mass situated in the lower part of the abdomen, which is movable, dense and hard. When we come to consider a growth of this kind, we naturally inquire as to the possible organs from which it may have arisen. We recognize that a growth situated in the lower part of the abdomen probably arises from the pelvic organs. The ones which are most likely to produce such growths are the uterus and ovaries. Solid growths in this region generally arise from the uterus, so when we find a mass which is firm and resisting, we at once form the conclusion that it is a growth from that organ. Examining by the vagina, we find the uterus turned backward, quite movable, not apparently connected with the growth. In additon to that, we find the mass, being movable, is associated with a certain amount of ascites. The growth has attained to a considerable size. The fact that the uterus is not associated with it leads us, of course, to realize that we have not a fibroid tumor of that organ. We come then to consider the character of growths which are likely to develop in the ovary. The great majority of tumors of the ovary are either glandular proliferating or papillary proliferating tumors, either of which may attain to considerable size. These tumors, however, have more or less sensation of fluctuation; rarely, unless the cysts are small, are we led to believe the growth is a solid one. Solid tumors of the ovaries are fibromata and sarcomata. Fibroid tumors of the ovary, however, rarely attain to large size. Large solid tumors of this organ are usually sarcomata. These are also associated where they have attained a considerable size, with more or less irritation of the peritoneum, which results in the presence of ascites, so that we have here in this patient a tumor which has attained a considerable size, which from its sensation is evidently a solid growth, one which is not sufficiently connected with uterus to indicate that it has arisen from it and is consequently, quite probably, an ovarian growth. The association, then, of these circumstances, its solidity, its size, and the presence of

*Clinical lecture delivered at the Jefferson Hospital, April 3, 1894.

†Professor of Clinical Gynecology, Jefferson Medical College; Gynecologist to Jefferson and St. Joseph's Hospitals; Obstetrician to Philadelphia Hospital; President of Alumni Association, Jefferson Medical College.

ascites, leads us to believe that we have in this patient a sarcoma of the ovary. The result of operation on ovarian sarcoma is not so favorable as with a tumor of a more benign character, yet where a tumor of the ovary is present and there is no indication of the extension of the disease through the pedicle to the deeper structures, we may hope for a successful removal. As I place my hand over the abdomen I find this mass is quite large, extends above the umbilicus and is so large that it rests upon the pelvis, that it is hard and resisting, indicating its character to be either a fibroid or sarcoma. The reasons for this latter conviction I have already given. We carefully cleanse the abdominal wall with alcohol, although it has been shaven and the parts thoroughly washed with soap prior to the administration of the anæsthetic. We will have to make an extended incision here, as this is quite a large mass to bring through. As we open the peritoneum, we see at once an escape of the ascitic fluid. In all operations it is important to watch carefully as we proceed, not to injure the bladder, as it is sometimes situated higher than normal. I was so unfortunate some years ago in an operation upon a case, to open the bladder, but immediately closed it with sutures and the patient experienced no inconvenience. As we look at the mass, we find the upper part of it is quite friable, easily broken down, so it is necessary to make our incision rather longer in order to readily bring it out. As it is somewhat friable, after having brought it out we grasp the pedicle with a pair of forceps, and cut away the tumor, leaving the ligation to follow. I ligate this pedicle with silk, using just as thin silk as will bear the necessary traction upon it, so we will leave no more foreign body in the abdominal cavity than is absolutely necessary. Having removed the one ovary, we examine carefully the condition of the other, and as I do so I also look to see the condition in the appendix vermiformis. As there is no sign of disease in either, we will proceed to close the wound. The right ovary in this case is completely atrophied, being not more than one-third its normal size. As there are but few adhesions and the cavity is perfectly clean, we will close the wound without drainage. In closing the abdominal walls we are particularly careful to introduce our sutures in such a way as to bring in apposition the different layers of tissue, aponeurosis in contact with aponeurosis, muscle with muscle. Before closing, as the muscle is a little ragged, the edges are trimmed off. Before the sutures are tied we ascertain whether we have removed all our sponges. It is very important to make sure of this, as it is a very unpleasant accident to have them remain. I am in the habit of using a gauze sponge as you see. Recently a very unfortunate experience occurred. I had directed that twelve gauze sponges should be placed in the basin for the operation. After the operation was completed, the sponges were counted and we found thirteen. Naturally, we were then uncertain as to whether we had all the sponges or not. Careful examination revealed no more in the abdomen. The patient did well until the end of ten days, when an elevation of temperature occurred, and an abscess formed in the line of the wound. At the end of some three weeks, in looking into the sinus, I saw something that had a suspicious look, and with a pair of forceps raised up a piece of one of our gauze sponges. This was removed and the patient recovered, but it has taught me a lesson not to depend upon others, but to see the sponges counted, both before and after the operation. In tying the sutures, do not tie them too tightly. Where they are drawn very tight they produce sloughing of the enclosed tissues, and if there is any possibility of infection, suppuration will necessarily result. I have seen gentlemen in closing the abdomen, make as much traction upon the sutures as if tying an artery. You want to tie them in such a way as to hold the surfaces firmly in apposition but not make undue pressure. Superficial sutures will be introduced where necessary, to hold the skin in apposition. The wound is carefully cleansed, dried, a layer of gauze placed over it, which is sealed down with collodion, and its surface dusted with a mixture of iodoform and boracic acid. Over this sublimate gauze is placed and a thick layer of sterilized cotton, which is held in place by strips of plaster and tapes, and finally a bandage. The patient will not be given anything by the mouth for twenty-four hours. Rectal enemata of

half a pint of salt solution with thirty drops nux vomica, will be given every three or four hours. These enemata have an influence similar to transfusion and allay the intense thirst from which these patients suffer. With the action of the nux vomica we increase the peristaltic movement of the intestines and favor the more rapid evacuation of gas.

DISPLACED KIDNEY.—The next patient is a woman 38 years old. She had an abdominal section done two years ago in an institution in this city, for what purpose I am not aware. You see the cicatrice of the incision, which presents a slight hernia. The patient complains of a lump in the left side. This is situated a little below the line of the umbilicus, and we will make a careful examination of it. I recognize it from its shape and outline to be the kidney. It is evidently a displacement of the left kidney. Not unfrequently we find patients who have had large abdominal growths removed, or where a woman has been very fleshy and subsequently become very thin, the kidney becomes displaced. This sometimes gives rise to very marked nervous phenomena, palpitation of the heart, disagreeable sensation in the abdomen, sinking and rapid pulse. These peculiar symptoms have been attributed to the traction of the displaced organ upon the brain of the abdomen, the solar plexus. From the appearance and outline of this mass, the peculiar sensations to which this patient has been subjected, I have no doubt that this is a displaced kidney.

ECTOPIC GESTATION.—You remember one week ago I brought a patient before you and made a diagnosis from the general appearance of the mass and history of the patient, that we had an extra uterine pregnancy. You will remember there were some difficulties in diagnosis due to the fact that while the tumor was quite large, no solid material could be discovered; that it gave a sensation of fluctuation and yet there was distinct resonance over its entire surface. This resonance was lower in tone than over the intestine, indicating that it filled a large cavity. You will remember that it was a question if we had an ectopic gestation, why should we have resonance; and the reply I gave was that as the fetus had been dead for some length of time, decomposition had occurred in the sac and the presence of gas thus formed produced this resonance. The tumor was situated behind the uterus and extended above it, pushing the uterus up over the symphysis, and the tension was so great on the sac that it was extremely difficult to say that we had not to deal with part of the uterus. The mass might be a retroflexed, impacted, pregnant uterus, the fetus still within its cavity; but the entire history led us to believe we had to deal with an ectopic gestation. The patient was operated upon the following Friday and on opening the abdomen we saw a large fleshy mass, which closely involved the intestines and was situated posterior to the uterus. This mass was opened into and at once there was a discharge of foul liquid and the parts of the fetus were recognized, seized and withdrawn. The placenta was attached to the anterior part of the sac so it could be entirely removed. The sac itself, involving, as it did, the intestines and the uterus, was impossible of removal, so that the parietal peritoneum was stitched to its surface and the sac cavity packed with iodoform gauze. Although this patient had a temperature prior to the operation of 104 degrees, at no time subsequently has it exceeded 100 degrees. Her convalescence is as rapid as could possibly be expected.

OVARIAN CYST; OVARIOTOMY.

I bring before you a young woman 19 years of age, who was in fairly good health until about three or four months since, when she began to experience distress and pain in one side, and as I expose the abdomen you notice there is considerable enlargement. I had the patient before you a week ago to-day and made a diagnosis of ovarian cyst for the following reasons: The protrusion is more marked particulary at the lower part of the abdomen. If we had ascites or fluid free in the abdominal cavity we would find it would be larger from side to side, and there would not be so marked prominence at the lower portion. We would also find in percussing over such an abdomen that there was resonance at the summit of the swelling, while in this it is dull over the entire swelling and resonant in the flank above, indicating that the fluid is confined within the sac. It is true we might have such an enlargement arising from a fibroid tumor, but in that

case we would not have fluctuation. You will ask may we not have absence of resonance in ascites. Yes, in those cases in which the distension is so great that the mesentery is too short to permit the intestines to float to the surface, or where due to some inflammatory condition the mesentery is shortened and the intestine bound down; but even in such cases we may be able to depress the abdominal wall, displacing the intervening layer of fluid and secure resonance by deep percussion, we are superficially afforded dulness. Having determined the fact that we have an ovarian cyst, we have assured this patient the only means for her relief and radical cure is by its removal. We have prepared this patient in the ordinary method for the operation by clearing out the alimentary canal, giving her liquid diet for the last twenty-hours, had the abdomen shaven, carefully cleaned, and a bichloride pad applied over it. As a final preparation, before making the incision we will scrub the abdomen with alcohol. An incision is made through the skin and superficial fascia down to the aponeurosis and the muscle. We endeavor as nearly as possible to strike the linea alba. This may be accomplished by making a slightly oblique incision through the aponeurosis, which will demonstrate the position of the muscular septum, when the incision may be completed through it the length of the external portion. The peritoneum is opened carefully, in order not to injure the cyst, and it should be remembered that it is possible a loop of intestine may be fixed between the parietal peritoneum and the cyst surface. Having opened the peritoneum we see the smooth, pearly, glistening surface of the cyst. If this were a uterine tumor we would find it presenting a red, flesh-like appearance, instead of this pearly, glistening surface. The trocar is driven through the sac wall, its contents emptied, the sac grasped with cyst forceps and drawn out as it empties. As there are no adhesions, the cyst is readily withdrawn. A couple pair of pedicle forceps are applied to its neck and the cyst cut away. The intestines are covered and held back by gauze pads. We now proceed to secure the pedicle. This we do by transfixing it with a piece of silk, using for this purpose as fine a ligature as will serve the purpose to firmly secure it. It is unnecessary to use heavy cable silk for this purpose. The firmer the silk ligature, the earlier will it disintegrate, and the less likely is it to give rise to trouble. Having removed the one ovary we now ascertain the condition of the other. This should always be done for the reason that we may have a large cyst in one ovary and the other one destroyed by cysts as well, and if the abdomen were closed without its examination or removal, the patient might have to undergo a second operation within a short time. As I raise the other ovary up, we find it also contains a cyst. This does not, however, involve the entire tissue of the ovary, and as this woman is but 19 years of age, it does not seem desirable to sacrifice both ovaries if it is possible to save one, so I propose to split this ovary, dissect out the cysts and then close it with sutures, in this way giving the patient one ovary that will be of service. A few years ago, in operating upon this case, I would have taken out this ovary on account of the cysts it contains, but I have several times of late done the operation I now do, that is, resect the diseased portion of the ovary and leave the healthy portion remaining. In one case the patient subsequently became pregnant and it has been a great source of comfort to me to know that I have resorted to this operation and have not rendered the patient completely sterile. The wound is closed by a single row of silkwormgut sutures so applied as to accurately appose the wound service. As no drainage has been used we will apply a piece of gauze, seal down its edges with collodion, and dust the surface with iodoform and boracic acid, over this apply additional gauze and cotton, which is held in place by pieces of plaster with tapes attached; over all, a bandage. This patient will not be given anything by the mouth for the next twenty-four hours, but she will have administered, every three or four hours, half a pint of warm water in which half a drachm of chloride of sodium is disolved and thirty drops tincture nux vomica added, per rectum. Salt solution acts somewhat as a transfusion and as it is absorbed, it decreases the amount of thirst the patient experiences, and in those cases in which there has been a severe loss of blood, diminishes shock. Nux vomica stimulates the contraction of the bowel, increases the probability of early discharge

of gas, and consequently decreases the tendency to tympanites. If there is any elevation of temperature, the patient will be given salines with a view of early evacuation of the bowels. If the stomach should be irritable, a combination of saline and calomel should be given, as the latter she cannot readily vomit. In this way we make the intestines drain the peritoneum. Ordinarily the patient undergoing such an operation does not experience any special inconvenience, and no purgative will be given unless about the second or third day, when preferably an enema consisting of an ounce each of magnesia, glycerine and hot water will be given.

At the close of the clinical work of the session, I take pleasure in congratulating you upon the amount of work you have been able to see. In the general and special clinics, some three ovariotomies have been done, a number of operations for removal of appendages, operations for laceration of the perineum, for vesico-vaginal fistulæ, recto-vaginal fistulæ, removal of the uterus through the vagina, and a sacral resection, in which the rectum, uterus, ovaries, tubes, posterior wall of the vagina, and perineum were removed. You will appreciate your advantages when I tell you my term of two years as a student in this institution, I saw but one ovariotomy and that patient promptly died from peritonitis. I saw one operation for laceration of the perineum, which consisted of denuding the outside of the vulvar orifice and closing it with a quilled suture. The gynecology we then saw consisted principally in the introduction of the speculum, exposing the cervix, passing a sound and then introducing a piece of nitrate of silver, which was permitted to remain in the canal.

THE TREATMENT OF DIABETES MELLITUS.*

DR. H. BARTH, PARIS, FRANCE.

At the out-patient department this mornimg you saw a patient with diabetes mellitus who will serve as the text of an attempt to trace the outlines of the treatment of diabetes mellitus as have been drawn from clinical experience rather than from the uncertain experiments of physiology.

Our patient is a man of seventy-one years, a tailor by occupation; he leads a sedentery life but is sober, and presents no antecedents worthy of note. For the last two or three years he has noticed a decrease in strength which he attributed to his age. Soon this was followed by neuralgic pains, at first limited to the head and face, then extending to the precordial region and, finally, to the abdomen and the kidneys. It is especially of this lumbo-abdominal neuralgia that he complains. It is bilateral and occupies symmetric points in both sides. Besides this he complains of cramps in the calves of his legs; during the past six months his waist has increased greatly in circumference; he easily becomes fatigued and out of breath at the least effort; finally, his virile powers, which had remained intact till then, have nearly entirely disappeared, a feature which he especially dwells upon.

This man has not the air nor appearance of an old man, for he is remarkably well preserved for his age. His face is ruddy, his form well rounded and his hair is scarcely turning gray. Examination of the internal organs revealed nothing abnormal, and the diagnosis would have remained *in suspenso* had we not, as is our usual habit, analyzed his urine. Here we discovered a very pronounced glycosuria, he excreting about eighteen grams of sugar per litre. Yet the patient is not troubled with great thirst, his appetite seems moderate; he only urinates three times during the night, and the quantity of urine is but little increased. In short, the disease in question is one of the latent form, a functional disturbance, whose cause must be discovered and righted before nutrition has suffered severely. What therapeutic measures have we employed in this case?

Before detailing them let me recall to you in a few words what we know of the pathological physiology of diabetes melli-

*A clinical lecture delivered at the Hospital Broussais, Paris.—Translated for THE MEDICAL AND SURGICAL REPORTER by F. H. Pritchard, M. D.

tus; these short outlines will permit us to point out the principal indications and to pass in review the corresponding therapeutic measures.

Without attempting to discuss the theories advanced which still rest upon uncertain arbitrary bases, it it safe to consider diabetes mellitus as due to a disturbance of nutrition dependent upon an exaggerated activity of the glycogenic function of the liver, while, at the same time, there is a absence of the moderating influence of the pancreas through its secretions. This double disturbance may be the result of a primary lesion of the nervous system. It appears most easily, or its effects are more manifest, in those subjects in whom interstitial combustion is defective, and whose organisms are incapable of using up the sugar formed, in excess. Therefore gouty and arthritic patients, as we know, are particularly liable to diabetes.

The accumulation of unused or unburned sugar produces an excess of this substance in the blood which, in turn, stimulates the secretion of urine, and the excess of sugar passes out from the body through the kidneys as soon as it is formed. In the benign forms this elimination suffices to prevent any grave functional disorder and the organism is enabled to repair its losses by abundant alimentation. But, in the grave cases, the equilibrium is kept up with difficulty, and the patient oscilates between two dangers; rapid interference and disturbance of nutrition if elimination be too prompt, and auto-intoxication if the glycose accumulates in the organism. The whole pathology of diabetes is in these two terms. The indications easily follow: they are derived from the pathogency, the cause and the ensemble of symptoms.

The diabetic makes two much sugar; the first attempt of the physician should be to moderate this. Now, clinical experience, as well as experiment, has shown that glycogen is formed in the system nearly exclusively from the amylaceous and saccharine foods. Hence, those foods should be reduced to a minimum which either contain sugar or are capable of being transformed into sugar in the intestine—such as the vegetables containing starch, bread, pastry and fruits. In slight cases an absolute meat diet for a few days will suffice to cause the sugar to disappear from the urine, at least for a time. It is true that the absolute interdiction of starchy foods cannot be maintained for a long time. Man is not a carnivorous animal and, by attempting to feed him on meat alone, one would run the danger of first ruining his appetite and then giving rise to grave disturbances of nutrition. But the art of the clinician consists in carefully combining foods in each particular case, so that the formation of sugar is kept at the lowest possible quantity while general nutrition does not suffer.

Besides diabetic measures, several drugs have the property of moderating the formation of sugar. They are the alkalies and opium. The alkalies, and particularly the bicarbonate of soda, render great service in the light forms, especially in the arthritic variety or that dependent upon a gouty base. This is not surprising if one recalls their efficacy in other diseases of the same family—in rheumatic affections, for example. They appear to act as alternatives. As to opium and its alkaloids, morphine and codeine, these modify, in a certain degree, the formation of sugar in slowing all the operations of nutrition and especially that of the emunctories. Their use is not without inconveniences and they are only to be thought of in serious conditions where the patient no longer assimilates and emaciation is rapid.

The diabetic does not burn up his sugar, consequently there is every day a pure loss of organic material. Therefore favor oxydation as much as possible. In sedentary patients recommend walking or any other physical exercise, as gymnastics, fencing, horseback riding or even bicycling, together with baths followed by rubbing of the skin. But, above all, avoid overdoing, especially in the advanced stage of the disease. In those threatened with acetonemia, substitute inhalations of oxygen. Where it is associated with gouty affections treat also this diathesis. The alkalies, iodides, and sometimes the salicylates, are here indicated. The meat diet is adapted to the typical diabetic, yet where the disease is mixed with arthritism it is prone to be very harmful, especially where the patient is affected with arteriosclerosis and a beginning interstitial nephritis. The clinician will appreciate the weak points and direct his treatment accordingly.

But the patient may also be nervous, neuropathic, either with over-excitement or depression, or these two states follow each other. Nervous excitement will increase glycosuria. Then the bromides or antipyrine are of service if the kidneys are intact. In depressed patients one may employ tonics, cinchona, quinine, the phosphates and arsenic, or, if necessary, the neurasthenic tonics as strychnine or igasurine, which also stimulate digestion. In rapid emaciation administer opium in small doses, advise rest, and those foods which limit tissue consumption. If elimination is deficient and acetonemia menace life give diuretics, order a milk diet and inhalations of oxygen.

Our patient presents a relatively benign form of the disease. He was put upon a test diet. For fifteen days he was advised to eat only meat, eggs, green vegetables, with a half bottle of wine at each meal. At the end of this time no trace of sugar could be discovered in his urine. Hence the prognosis is favorable and an equilibrim will be easily maintained by appropriate hygeine. No sugar nor sweet foods, only three and a half ounces of bread at a meal, but very little of potatoes, but fruits—excepting grapes—will be allowed. As a beverage, wine diluted with an equal quantity of water. To keep him up in nutrition, arsenic in some form, will be prescribed in small doses and for a long time. Exercise to overcome the results of his sedentary occupation; a walk of an hour each evening and morning in the open air. He must report at intervals that his urine may be examined—a precaution necessary in all diabetics, even after an apparent recovery.

The task of the physician is more difficult and complex in those cases which do not yield and the test diet gives no results. Here the patient must live with his affection, and the dyscrasia be kept at bay as long as possible. This is possible if the course be not too acute, and docility and perserverance be manifested on the part of the patient.

From time to time, you have remarked a diabetic patient whom I have cared for for nearly five years and who has been improving steadily since then. He is a man of fifty years, a tavern-keeper by occupation, rather obese and somewhat addicted to alcohol. A short time before I first saw him, he had been for a time in another hospital where he had been upon an exclusive diet of meat and animal fats. Instead of improving he became dyspeptic and his general health greatly suffered. We found him weakened, with nearly no appetite, his tongue red, and as if varnished; he also had frequent vomiting and diarrhœa. His urine was scanty and turbid, not only containing twenty grains of sugar to the litre, but eighty grams of albumen. We discovered manifest signs of generalized arterio-sclerosis with a little cardiac hypertrophy; besides his liver was large and hard. In short, digestion was disturbed and all his emunctories were functionating badly. Neglecting for the moment the glycosuria we tried to increase the urinary secretion and eliminate the toxines contained in the system. We accordingly prescribed a milk diet at the risk of increasing the amount of sugar. In fifteen days the urine was normal in amount, the albuminuria had nearly disappeared and the quantity of sugar was also decreased. At the same time, the digestive functions became normal and his general nutrition greatly improved. The iodide of sodium was prescribed in small doses, five cgms, per diem for ten days of the month; during the remainder he drank wine diluted with an infusion of cherry stems. Every ten days he took a glass of a solution of the sulphate of soda or magnesia as a cholegogue. Twice a year the iodide is replaced by the salicylate of lithine, one gram a day in powders. As to his diet it was never very rigid: eggs, green vegetables, milk porridges. His general nutrition is all that could be wished though he can not give up alcohol entirely. No polyuria nor azoturia. Once or twice during the five years symptoms of auto-intoxication, dyspepsia, diarrhoea, somnolence and great loss of strength have reappeared but a few days of milk diet served to set these aright; this shows that in this typical arthritic patient there is no danger of excess of sugar in the blood but of failure of elimination. The patients of this type are those which one meets with in city practice; patients of middle age or the shady side of life, with a hereditary gouty history, arthritics and often gouty or obese and nearly always affected with more or less pronounced arterio-sclerosis. To try to place them under a strict antidiabetic diet is a mistake for it easily disturbs digestion, with consequent

hepatic and renal congestion. Besides, these patients easily become disgusted and are only too inclined to leave off all treatment if you ask them to do that which they can not. As long as the quantity of sugar remains moderate all you efforts should be directed towards modifying the diathesis: in fat and gouty subjects administer the alkalies and iodides, watch the digestion and the action of the liver, stimulate the circulation and prevent accumulation of waste products. In neuropathic subjects alternate the antispasmodics, valerian, bromides and antipyrine with the reconstituents, arsenics, phosphates, quinine, Peruvian bark and strychnine. Finally, where possible, complete the treatment by employment of an alkaline or arsenical mineral water. All these therapeutic measures so valuable in the benign and prolonged forms will completely fail in malignant diabetes which is not surprising if one admit, with Lancereaux that this form is due to acute atrophy of the pancreas, a destructive lesion probably of infectious origin. Here absolute meat diet will yeild the best results. Roast beef, eggs and fatty foods, as much as the stomach will bear to the exclusion of other foods will be indicated. Sustain the strength with broken doses of quinine and cinchona, to which may be added those agent hindering tissue waste as coffee, cocoa, kola nut, and, in a limited measure, alcohol. If, in spite of this, emaciation is rapid limit it by opium or codeine in elevated and rapidly increased doses. Place the patient in a state of absolute physical and moral repose. We recently had an example of what a pernicious effect fatigue will have in such a case. A man of thirty-two years affected with maligant diabetes had had his disease arrested by treatment and one morning, after a discussion with some of his neighbors he suddenly left the hospital and walked home, a long distance. As soon as he arrived there he went to bed, was attacked almost immediately with diabetic coma and in two days he was dead. Put the patient on his guard, examine the odor of his breath frequently, watch for the first signs of acetonemia and at the first sign of this complication place him on an absolute milk diet, give him inhalations of oxygen and hypodermics of caffeine, the only means of preventing a fatal issue.

TRANSLATIONS.

THERAPEUTICAL SUGGESTIONS FROM FOREIGN JOURNALS.*

ANTIPYRINE IN PAINFUL AFFECTIONS OF THE BLADDER AND PROSTATE.

Dr. Brik (*Hospitals Tidende*, No. 24, 1894,) has obtained very favorable results with antipyrine in painful prostatic and vesicle diseases. In those with prostatic affections the frequent urination especially at night, is decidedly decreased and becomes easier and less painful. He administers the remedy as a rule by the rectum-0.50-2.0, dissolved in sixty grams of warm water. In more obstinate cases he injects twenty to thirty ccms. directly into the bladder itself. Also instillation of ten to twelve drops of a five to twenty per cent. solution into the prostatic part of the urethra by means of Guyon's instillator has yielded him good results in painfulness of this part.

Dr. Vigneron (*Annals des Organes Genito-Urinaires*, May, 1894,) also warmly recommends antipyrine as a local analgesic of the bladder. He employs it especially to prevent pain after injection of solutions of the nitrate of silver and sublimate, in patients with cystitis. He injects ten to twenty grams of a four per cent. solution of antipyrine into the bladder and allows it to remain there for ten minutes before either the nitrate of silver or sublimate solution is injected.

OPIUM IN LARYNGEAL STENOSIS IN CHILDREN.

Dr. Carl Stern (*Therapentic Monatshefte*, May, 1894,) observing that in this disease the dyspnœa is increased by restlessness, mental excitement or anxiety attempted to quiet the nervous system by means of opium. In this manner he has been able to obtain great relief in many cases, and to avoid tracheotomy where it

* In charge of the Translator, F. H. Pritchard, A. M., M. D.

was apparently indicated. His observations were made upon children sent to the Marien Hospital at Dusseldorf, where after treatment in town, they were declared "ripe" for a tracheotomy. The dose was from two to three drops of wine of opium according to the age of the child; children between one and two years require three drops, as a rule. If no results are observed after a half hour he gives two drops more. Naturally enough he does not regard this treatment as a substitute for tracheotomy, for in many cases he finally was obliged to operate, but it is a valuable palliative method.

CARDIAC WEAKNESS IN ARTERIO-SCLEROSIS.

In *Lo Sperimentale*, No. 12, 1894,) the disagreeable palpitation of arterio-sclerosis from cardiac weakness is said to be quite well controlled by the following formula:

℞

Chloral Bromide.....Soda āā	4	o (ʒj.)
Water.....		
Codeine.....		10 (grs.jss.)
Syrup Orange Peal. āā.....	45	o (ʒjss.)

S. A desertspoonful every hour until the heart is quieted.

BELLODONNA AND THE GALVANIC CURRENT IN EPILEPSY.

Prof. E. De Renzi (*Rivista Clinicate Therapeutica*, No. 6, 1894,) in a case of epilepsy, which resisted large and progressive doses of the bromides tried belladonna and gobvanism in a young boy. Not much was expected but the result was surprising. Instead of having attacks every day, especially during the night, of quite an intensity, there followed a few light seizures of short duration during the first days of treatment, and then they ceased entirely. The belladonna was administered as follows:

℞

Alcoholic Extr. Belladonna..... Extra Gentian. q. s. for forty pills	20 (grs.iij.)

S. One pill morning and evening.

The galvanic current was applied for five to fifteen minutes to the spinal column; one pole to the back of the neck and the other to the lumbar region. The electrodes were three to five centimetres in diameter, and the strength of the current from two to six milliamperes. From time to time the current was reversed.

TREATMENT OF CRUSHING INJURIES OF THE EXTREMITIES.

Dr. P. Reclus (*La Semaine Medicale*, No. 41, 1894,) in these forms of injuries employs as an antiseptic salve, the following formula:

℞

Salol		
Resorcine, āā.....	12	o (ʒiij.)
Antipyrine, āā.....	12	o (ʒiij.)
Boric Acid.....	20	o (ʒv.)
Iodoform.....	1	o (grs. xv.)
Vaseline.....	160	o (ʒv.)

After a few whiffs of chloroform to render the patient slightly insensible, the crushed parts are washed with water at 55-60° irrigating with sufficient force to wash out the clots, foreign bodies, dirt, etc., and to reach all the pockets. Then this salve is applied on pieces of sterilized gauze which are tucked into all the crevices, the whole wound is then covered with the salve, and over this absorbent cotton is placed. This dressing is renewed every five to six days. It is advisable to apply either a splint or a plaster of Paris bandage. When the injury has not been too severe one may sometimes, with this treatment, succeed in saving the entire limb. Otherwise amputation may be delayed until partial cicatrization has taken place and a better stump is obtained.

TAPE-WORMS IN CHILDREN.

Dr. Descroirilles (*Rivista Clinicale Therapeutica*, No. 6, 1894,) advises the following method of treating tape-worm, in children:

1. For two or three days keep the child on a preparatory diet; soup from lean meat, eggs, milk, bread in moderation.

2. During the last twenty-four hours, absolute milk diet.

3. The evening before expulsion is attempted give a rectal injection, and a second and abundant one three hours before administering the remedy. His formula is as follows:

℞

Ethereal extr. Male Fern.....	8	o (ʒij.)
Calomel.....		40 (grs. vj.)
Peppermint Water.....	10	o (ʒijss.
Gum Arabic.....	5	o (ʒj ¼)
Simple Syrup.....	20	o ʒv.)
Distilled Water to.....	60	o (ʒij.)

S. To be taken by the spoonful every ten minutes.

5. A few hours after its administration, give a rectal injection of twenty-five to thirty grams (six drahms to an ounce) of castor oil.

He also recommends Duhourcau's method which consists in administering in capsules, the green ethereal extract of male fern with chloroform, castor and croton oil. The chloroform anesthetizes the parasite, the male fern in this form is a tænicide, while these oils act as purga-

tives. He thinks it an ingenious combination which covers all the indications of the condition.

A SALVE FOR ACUTE ARTICULAR RHEUMATISM.

Dr. Fienga (*La Semaine Medicale*, No. 34, 1894,) recommends highly the following formula in the treatment of acute articular rheumatism:

℞

Salicylate Soda	30	o (℥j)
Iodoform	10	o (℥ijss.)
Vaseline	100	o (℥iij. ℥j)
Extr. Hyoscyamus	5	o (℥ij¼.)

The affected joints are rubbed with this salve and then wrapped in cotton; they should be renewed every six to twelve hours. Under the influence of this local treatment and milk diet, without other internal treatment a rapid cure was obtained in all the cases under his care.

TREATMENT OF ECZEMA OF THE EXTERNAL EAR.

Dr. Chatellier (*Revue Internationale de Bibliographie Medicale*, No. 11, 1894,) from an experience of more than six years recommends iodol most highly, in this affection. The vehicle only varies with the form of the disease.

EXUDNG ECZEMA.—In the generalized and confluant form occupying the auricle and retro-auricular fold or situated in the meatus itself as little vesicles such as are sometimes observed after treating suppurative inflammation of the middle ear, by boric acid in powder or dissolved in alcohol, the affected part is washed with Van Swieten's solution, diluted with three or four times its volume of water. Then it is carefully dried with absorbent cotton. The external parts are then dusted and the meatus filled with finely powdered iodol. A pledget of cotton will serve to hold the water in place. Renew this dressing morning and evening until a cure follows.

DRY ECZEMA.—This affects the auricle or the neighboring parts. Treat as in the former form, and instead of dusting with the powder apply the following salve:

℞

Iodol	1	00 (grs. xv.)
Lanoline	30	o (℥j.)

Cover with a layer of cottun.

ECZEMA OF THE CANAL.—Remove the epithelial scales by injecting diluted Van Swieten's solution and dry with absorbent cotton wrapped around the end of a probe. Fill the canal then with:

℞

Iodol	1	o (grs xv.)
Albolene	30	o (℥j.)

Introduce a pledget of cotton to retain it as long as possible. Renew this dressing morning and evening so that the affected parts are always in contact with the remedy. At the end of fifteen days the eczema will be cured. Then wash out the canal well and leave off treatment. Lanoline and albolene are preferred to vaseline, as this latter is often impure and irritating.

CORN SMUT AS AN OXYTOCIC.

Dr. V. Grouzdeff (*La Semaine Medicale*, No. 34, 1894,) in a series of observations made in Prof. Lebedeff's obsterical clinic in St. Petersburg on eight parturient women with uterine inertia, comes to the conclusion that corn smut is an efficient oxytocic. He claims it to be devoid of the inconveniences of ergot and indicated at all stages of labor, with insufficient contractions of the uterus. He employed a tincture of the drug and in doses of two to four grams (gtts, xxx ℥j.) In all of his cases except one where there was no result, strong and regular pains appeared, in twenty-five to forty-five minutes. It produced neither tetanic contractions nor nausea nor vomiting. Other means as quinine, alcohol, baths, etc., had been first tried in all these cases before the remedy was given.

CHRONIC ARSENICISM.

Drs. Gaucher and Barber (*Gazzetta Degli Ospedali*, No. 78, 1894,) presented a case of chronic arsenic poisoning before the French Dermatological Society recently. The patient had a number of cicatrices from ulcerations upon the scrotum, palmar and plantar keratosis, a perforation of the nasal septum, a decrease in the quantity of urine and other signs of interstitial nephritis. His hands were the seat of a pronounced sclero-dactalia. They regard all these symptoms of chronic poisoning by arsenic as of central origin, and as a trophoneurosis independent of vascular sclerosis.

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SATURDAY, AUGUST 18, 1894.

EDITORIAL.

"CURING" INEBRIETY.

Only of recent years has science recognized inebriety to be a veritable disease. If the former conviction that inebriety was exclusively a vice is an error, equally erroneous is the belief of extreme reaction that inebriety is exclusively a disease. The truth lies between these extremes. Inebriety is at once a disease and a vice, and appears as either, according as the one or the other characteristic may predominate. It may exist as a disease with the vicious element entirely wanting; as in the case of an individual whose inherited mental and physical tendencies toward alcoholism are utterly out of proportion to his personal power of resistance when such tendencies have been allowed a single opportunity to gain ascendency. In this phase inebriety is a morbid condition—dipsomania,—and is characterized by the irresistable obsession and impulse to drink, recurring as periods during which the victim abandons himself absolutely to the thirst for alcohol. Between attacks the unfortunate patient may be totally abstinent; may appear perfectly rational, and may be able to conduct all the ordinary affairs of life without evincing any unsoundness of mind. He may even make most heroic but ineffectual effort to resist the recurring impulse to drink. Such an one is undoubtedly diseased rather than vicious. The dipsomaniac invariably belongs to the degenerate class which is characterized by the so-called psychopathic constitution. His physical make-up is always imperfect and his mental and moral balance is never stable.

On the other hand inebriety may be essentially a vice, at least in so far as it may have been acquired and for some time continued as a vice. Thus an individual in whom hereditary tendencies are not pronounced, or are entirely wanting, may acquire the drink habit willfully. Inebriety begun as the vice, if continued, invariably terminates as the disease.

But whether vice or disease, a remedy has always been sought for. So long as it was considered as vice simply, the only remedies indicated were such as are regarded available for moral obliquities. When inebriety was recognized as a dis-

ease physical as well as mental and moral, relief was demanded at the hands of the medical profession, and, pending the further study and investigation of the disease with view to obtaining a rational mode of treatment, an opportunity is afforded charletans to grow rich by taking advantage of the hopes and credulity of the long suffering public. This opportunity has not been neglected and the field is already overflowing with nostrum-boomers.

A nostrum is a fraud wherewith fakirs fleece fools. No matter how greatly nostrums may vary in other respects, all bear the long-ear-marks peculiar to the species—characteristics indeed which define the class. Briefly mentioned these distinctive pecularities, which are always offensively prominent, are: (*a*) A marvelous discovery, either as the crowning result of a life-long effort to better the condition of man, or as a special revelation to a devoted philanthropist, or, perchance, an observation accidentally made during some profound scientific research in another direction. (*b*) A secret to be preserved at all hazards: a mystery so unfathomable as to cape the deepest investigation of modern scientific precision. The power is so potent that only the initiated can safely exercise it, and knowledge of it allowed to the general would bring untold devastation on humanity. (*c*) It is cordially condemned by the science which cannot appreciate it, and is reprobated by a bigoted medical profession which decries any departure from the ruts in which it runs. It is foolishness to the Greek and to the Jew a stumbling block. (*d*) It is an infallible specific for diseases that have hitherto been regarded incurable. This may be proved by testimonials from innumerable grateful ones, who, after years of illness and suffering all things at the hands of many physicians, have been cured by taking an indefinite amount of the specific, and are now rejoicing in absolutely perfect health, etc. (*e*) This mysterious power, so providentially revealed to some hitherto obscure but worthy lover of his fellowmen, despite the ridicule and opposition of jealous and envious self-seekers, will be most generously and faithfully used for the healing of the nations by the self-sacrificing trustee—for a consideration.

These characteristics never occur coincidentally save in a nostrum. And through them a nostrum should be as evident to the most credulous as it is to thoughtful educated people. *Verbum sat.*

All the so-called "cures" for inebriety present the above characteristics, but one cure in particular has been manipulated so skillfully that its notoriety has become universal and it has developed into a commercial factor of some prominence. The reference is made to the "Bi-chloride of Gold Cure."

Without entering into any discussion of this particular business undertaking, we append on editorial from the *Christian Advocate*, of New York, remarking that we are pleased to see this effort to obtain and make general information valuable to the public. Medical men are now beginning to obtain statistics of the results of the "Gold Cure," which will undoubtedly confirm the correctness of the first estimate of the enterprise, which was reached by the application of general principles. But the public-at-large need reliable information from sources other than professional. Religious papers are preferred advertising media for nostrum venders, and credulous or careless clergymen are the endorsers most sedulously cultivated by charletans. And most persistently has the influence of the clergy and of religious bodies been sought, obtained and paraded by the philanthropic institution in question. It is therefore most refreshing to find a religious paper, perhaps the most influential in America, with widespread sources of reliable information and much wider opportunities for disseminating it, without pre-

judice or bias undertake the work proposed:

"The public has often been assured that ninety-five per cent. of all the KEELEY graduates are "cured" or "reformed," and that the relapses are few. We know of the KEELEY "graduates" that we have met four have relapsed, two have committed suicide, and others are in asylums, making more than fifty per cent. of the small number that we chance to know.

"Though we do not doubt that a considerable number have not been intoxicated nor used intoxicating liquors in any way since they left the KEELEY Institutes, we do not believe that the representations attributed to the agents and managers of the said institutes are to be received without an uncertain but large discount. It is difficult to obtain accurate and impartial statistics, but we will attempt it with the cooperation of our readers, and herewith submit a plan.

"So far as we can ascertain at least seven thousand *Ministers* and fifteen hundred *Physicians* are numbered among our subscribers, though some of the latter, whose papers are addressed "Doctor," may be *Dentists*. They are scattered over the United States and in foreign countries. The number of persons who have been inmates of the different KEELEY institutions is large, and they come from all sections. Our plan of ascertaining the results requires co-operation from ministers and physicians, a little thought, and a willingness to take the pains to send us a letter or postal answering questions which are herewith submitted.

"Before stating the questions explanations are necessary.

Many drunkards are periodical; they have often passed three, six or even nine months without tasting ardent spirits or anything that can intoxicate. Suddenly they start upon a terrible spree which becomes known to their friends, and usually to the public. After this subsides they go on as before till another outbreak.

"Others are sots, drinking themselves stupid or helpless nearly every day in the year, many able to attend to business in the morning, but not to be seen for such purpose after four or five o'clock. Some are regular drinkers, ordinarily drinking but little, but combining therewith the periodical characteristics.

"In view of these facts, should a *periodical* drunkard [or dipsomaniac, methomaniac, or oinomaniac] enter a "KEELEY cure," and remain sober for six months afterward—if he had been in the habit of being sober for long intervals between his sprees—no proof of his reformation in any proper sense could be adduced from his keeping sober for a few months after the treatment. We think that *nine* months is the shortest time that can reflect light on the question of *cure*;—though a less period, unless some evil results in other respects occur, may indicate the value of the treatment as an *alleviation*. Our questions, therefore, addressed exclusively to ministers and physicians, are the following:

"1. How many do you *know* who have taken the KEELEY treatment?

"2. Of those who have taken it, how many, *to the best of your knowledge and belief*, have remained *sober and totally abstinent* for a period of *nine* months or more?

"3. How many have *relapsed* in less than that time or have committed suicide, or become insane, or have been physically seriously injured by the treatment?

"Except in the case of *personal acquaintance*, we do not ask for information from subscribers in general because we would have no way of preventing the duplication of returns. By confining it to ministers and physicians we get one or two persons in a locality, and can correspond with them as to whether they have duplicated.

"We wish no information from *agents* or *managers* of "KEELEY cures" or *graduates* thereof. The former are expected because of their business interests: the latter, because in that case we should get repeated information from the same locality. Neither do we wish mere heresay information from ministers or physicians. If A tells B that he knows C; that C was a drunkard and was cured by a KEELEY institute, and has never touched a drop of liquor since, and B tells us about it, it is of no value in this case. Nor do we wish *names*, but on the honor of a minister or physician we merely wish, as stated above, the number that he knows to have taken the KEELEY cure, and what were the results. Nor do we wish this inquiry to be confused with any other "cure." Since Dr. KEELEY began to be noted and to make vast profits, scores of imitators have sprung up, as is always the case; and he has a number of times declared that his institutes have been traduced by the fact that other graduates, who have lapsed, have been charged to them. We will tabulate and publish the returns"

Uræmia.

Dr. L. D. Kastenbine highly recommends:

℞

Tinct. ferri chloridi	℥ss
Spiritus ætheris nitrosi	
Lid. ammon. acetatis	āā ℥j.
Aquæ destillatæ	℥iiss.

M. et fiat mistura.

Sig.: Tablespoonful in a wineglass of water.

—*Louisville Medical Monthly.*

Torsion of Arteries for the Arrest of Hemorrhage.

Doctor Claude A. Dundore, of Philadelphia, in an interesting paper describes this method and credits Amusat with first having observed the effect of arteries in arresting hemorrhage.

He has used torsion in 113 cases of all kinds with no signs of secondary hemorrhage, and with fewer cases of delayed tissue unions. He thinks that if the vessel is dieased that torsion is safer than the ligature, which very often, even when little force is exerted in tying, partially or entirely severe the external coat, thus by hastening the sloughing of the end of the vessel, tending to produce secondary hemorrhage. In cases of diseased vessels, the limited method of torsion should only be used, and the end of the artery should not be rotated more than twice.

In plastic operations the fact that we are enabled to close the wound without leaving a loop of catgut to irritate or produce sepsis and delay union, is an advantage which cannot be to highly appreciated.

Doctor D. ends his paper by stating that he is satisfied that those who will give torsion their practical attention will be amply repaid and thoroughly convinced that as an agent for the averting of hemorrhage it is the equal if not the superior of the ligature in many respects. —*International Med. Mag.*

ABSTRACTS.

DIAGNOSIS IN PÆDIATRICS.

The Dublin *Jour. of Med. Sc.* points out that the complexion may be clear and delicately tinted, though pallid, as in the tubercular. If cyanosed, it suggests a respiratroy cause; a leaden or earthy tint, especially with great pallor about the upper lip; will frequently be found with gastro-intestinal trouble; the swarthy (*café au lait*), though pallid, face may put the physician on his guard for syphilis; in the spasmodic stage of whooping-cough the face becomes swollen, often ecchymosed, the eyelids puffy, the conjunctiva conjested and bloodshot; the sunken, vacant eyes, with dark areola around them, indicate great collapse. The expression of the face will not infrequently indicate even the seat of the disease. Jadelot has pointed out the following lines in the infant face which, by their position, indicate the seat of derangement: The oculo-zygomatic line from the inner canthus of eye downward and outward to the cheek, a little below the malar eminence, pointing to derangement of the brain and nervous system. The nasal line, from the upper part of the ala nasi. curving downward around the corner of the mouth; said to be never absent in gastro-intestinal derangement. The labial line, beginning at the angle of the mouth and running downward and outward, generally accompanied by rapidly-moving nares; a fairly trustworthy sign of diseases of the lungs and air-passages. The child's attitude should also engage attention. A healthy infant lies with limbs semiflexed, and, if on his back, inclines one cheek to rest on the pillow. When the limbs and trunk are rigidly stretched out, tetanus is suggested; when unconscious, or in great weakness and prostration, the child will be found lying flaccid on his back, with face to ceiling. If found on his side, curled up and with head retracted, a frown will probably be seen, together with the oculo-zygomatic line, suggesting cerebral irritation, or, if there is opisthotonos, spinal irritation. If there is intolerance of light, as in cerebral irritation, the face will be buried in bed-clothes. In abdominal discomfort or in rickets, the child presistently lies on his face, or even rests on elbows and knees. As regards the cry, some information may also be gained here. Sharp, violent fits of crying, with vigorous movements of the legs, usually indicate colic; the sudden, sharp, single, piercing cry uttered at intervals, while the patient lies in a stupid drowsy, semi-unconscious state, is but too suggestive of meningitis; while the hoarse grating cry of syphilis is characteristic. In contrast to these, note when the child does not cry, as in profound weakness brought on by diarrhœa, and in grave pulmonary affections where the breath is too precious. Lastly, both suction and deglutition, should be noted. Dyspnœa and acute fever cause suction to be performed in short snatches; syphilis also necessitates pauses for breathing. In thrush or ulceration, suction and deglutition are evidently performed with great pain; if the throat be sore, there is frequent cough and noise in deglutition. In great prostration, if the child swallow at all, it is an exceedingly hopeful sign.

Antidote to Potassium Cyanide.

J. Kossa (*Vratch*), considering that potassium permanganate ought, theoretically, to act as a chemical antidote to potassium cyanide, has performed experiments, the results of which appear to fully justify his hypothesis. Rabbits were shown to be fatally affected in a few minutes by .01 gramme of the poison, but if, at the time of administration, .5 gramme of permanganate dissolved in fifty cubic centimetres of water was also introduced into the stomach, doses of cyanide up to .1 gramme failed to cause death. Larger quantities (.2 gramme) proved fatal under similar conditions, but the action of the poison was much delayed. Successful experiments were also performed with aqueous solutions of hydrocyanic acid containing .1 per cent. It is suggested, therefore, that in cases of cyanide-poisoning one-half to one-third litre of a three to five per cent. solution of permanganate be administered immediately. — *Druggist's Circular and Chemical Gazette.*

TREATMENT OF FUNCTIONAL DYSPEPSIA.

Dr. R. C. M. Page states that, in any case, meals should be regular, and the food eaten with deliberation instead of being swallowed hurriedly, especially while mentally worried about some scheme or other. In atonic dyspepsia, as a rule, tonic treatment is indicated and the patient has to be built up. But in irritative dyspepsia the very opposite course is often to be pursued, care being taken especially to avoid starchy and fried foods and fats, as well as alcoholics, Besides removing the cause and regulating the diet, many remedies have been suggested. Of these he recommends papoid as one of the best. It dissolves abnormal mucous secretions, thus removing a prime cause of fermentation besides stripping the food of its mucous envelope and thus exposing it to the action of the gastric juice. In addition to its direct digestive action on the stomach's contents, it seems to have a stimulating effect upon the gastric mucous membrane. Its therapy is not materially interfered with by any of the drugs usually given internally and it is equally efficacious in acid, alkaline, or neutral media. That it is not destroyed in the stomach, like animal pepsin, is shown by the fact that even in ordinary doses a trace of it may be found in the stools, thus showing that the whole gastro-intestinal tract has received the benefit of its action. Where diminished peristalsis is marked accompanied by accumulation of gas in the stomach and bowels, it is well to add strychnine. The average dose of papoid is about one and a half to three grains thrice daily after meals, and one of the most convenient methods for its administration is in tablet form. With papoid other remedies may be used. One of the best is the rhubarb and soda mixture with tincture nux vomica, or if the case be due to abuse of alcohol (rum stomach), tincture capsicum should be added. where palpitation and irregular heart's action are present tincture digitalis may be added to the same mixture (℞. Tinct. digitalis ʒi., pulv. rhei, pulv. sodii bicarb. aa. ℈ ii, aquae q. s. ad. ʒxvi, m. sig. ʒi ter die). Washing out the stomach by means of the stomach tube was once in vogue, but now it is chiefly where dilatation is marked as in obstruction to the pylorus from cancer or other cause. Besides actual treatment, patients who can afford it often improve, or are perfectly cured, by taking a course at some watering-place, care being taken to make a proper selection, which can only be done by advice of some physician who is intelligent on such subjects.

CARE OF THE MOUTH IN SICK PERSONS.

Rosenback (*Zeit. fur Krankenpflege,*) says that in many illnesses there is almost sure to be secondary trouble in the mouth if preventive measures be not taken. A warning sign is dryness and redness of the tongue and mucous membrane of the mouth, with difficulty in swallowing; further signs are an evil odour from the mouth, coated tongue and gums, bleeding of the gums, etc. Just as care of the mouth is required in patients with carious teeth, smokers and chewers of tobacco, so it is also in the case of unconscious or paralysed persons; patients with fever or suffering from chronic digestive complaints; those taking medicines, such as mercury or iodides, or who, on account of general weakness, have to take strong alcholic drinks; but, perhaps, the most important class of those in whom special care of the mouth must be taken are patients with fever. Parasites are always present in the mouth, but it is only when the tissues are weakened that they undergo invasion by these parasites, which become then really pathogenic. There is nothing which one can do for sick persons which is unimportant, and by neglect in the care of the mouth convalescence may be retarded. Rosenbach concludes with the following rules: (1) Patients with good digestive powers, free from fever, and with no loss of consciousness require no more than the ordinary care of the mouth. (2) In children and very old patients the less solid food taken the greater should be the care with

the mouth. They should rinse the mouth out several times a day with lukewarm water containing a little common salt, tincture of myrrh or eau-de-Cologne added to stimulate secretion. When there is a tendency to bleeding of the gums or when the teeth are bad a pinch of powdered boric acid may be twice daily rubbed in between the lips and gums. Patients with false teeth should remove their false teeth when, owing to loss of appetite or chronic gastric disturbance, they cannot take solid food. (3) In patients with partial loss of consciousness the mouth should be examined several times a day for small sores, such as may arise from the pressure of the teeth on the lips, etc. Such sores should be powdered with a little boric acid or chlorate of potash, and the cracks at the corners of the lips heal quickly if dried with a clean towel and treated with boric acid or vaseline. The mucous membrane may be stimulated by wiping the tongue and mouth and pressing on the tongue with a moist towel every two or three hours; if necessary, the hinder part of the tongue should be cleaned with a wad of cotton wool fastened to a stem. If the patient sleep with the mouth open the air in the room must be kept moist; a moistened layer of muslin laid on the mouth may be of some service. (4) Patients with fever should have something to drink—cold water or weak lemonade—at least every hour; one must not wait until the patient asks for a drink. Besides preventing dryness, the fluid maintains the activity of the glands and the whole function of the mucous membrane. Many patients are prevented from drinking by a painful, dry and cracked condition of the lips, and therefore all feverish patients should from the commencement of their illness have their lips rubbed several times a day with vaseline or fat. In protracted cases of fever the mouth may also be swabbed out with oil, fat or greatly diluted glycerine.—*British Med. Journal.*

OXALURIA.

Boursier (*Ann. de la Soc d' Hydr. Med. de Paris*, 1894) gives notes of 66 cases treated at Contrexéville. Oxalate of lime is probably intimately allied to uric acid, and out of 450 patients suffering from gout or uric acid gravel Boursier found crystals of oxalate of lime in the urine of 150. Debout d'Estrees found it slightly less frequently. The high specific gravity, usual in the urine of oxaluria, is probably due to the presence of oxalates, and when these are replaced by uric acid the specific gravity of the urine usually falls. The renal pains in oxaluria vary much in intensity and situation; they may be accompanied by nausea, and take on the appearance of true nephritic colic, with or without the expulsion of oxalic gravel, but the intensity of the pain is in no relation to the size of the oxalic fragments. Hæmaturia was observed in more than a third of the 66 cases; it is usually very slight, and results, not from the presence of oxalic gravel, but from congestion of the kidneys due to the irritation by the oxalates. In one case hæmoglobinuria, like paroxysmal hæmoglobinuria, was observed. In oxaluria the bladder may be irritable, and the frequency of micturition, accompanied by intermittence in the stream and a sensation of burning in the urethra, may give rise to a suspicion of vesical calculus. Oxaluria may be, so to speak, physiological, that is, due to a diet with vegetables rich in oxalate of lime, or it may be pathological. In the latter case it forms part of a "syndroma" of symptoms, the chief of which are dyspepsia and nervous troubles. Dyspepsia was noted in half of the 66 cases; constipation was also frequent and often accompanied by hæmorrhoids; diarrhœa was noted in some cases. Owing to their nervous troubles many of the patients may be classed as neurasthenics. Boils and carbuncles frequently accompany oxaluria. Boursier has not noticed the spasmodic cough recorded by some English authors. In the etiology of oxaluria heredity plays a great part, especially hereditary predisposition to arthritism. As determining causes Boursier attaches most importance to dyspepsia and nervous troubles; he considers that oxaluria should be regarded rather as a form of dyspepsia than as a separate disease; he does not, like Begbie, think that the dyspepsia and nervous troubles are due to a sort of "oxalæmia."

Boursier follows Hahn and Beneke in attributing oxaluria to an arrest in the catabolic changes normally undergone by nitrogenous material before excretion from the body; hence it is that oxaluria is induced by all the causes which lead to a disturbance in nutrition, the *ralentissement de la nutrition* of Bouchard, which prevents the proper oxidation in the tissues. Oxaluria may lead to the formation of oxalic gravel or calculus in the kidney or the bladder; these differ from those of uric acid, because in the case of oxalate of lime the frequency and intensity of nephritic colic are in general greater and hæmaturia is more frequent; another difference is that uric acid sand is more often expelled than oxalic sand. Oxalic calculi take longer to form than those of uric acid, and therefore relapses after their removal are less frequently observed. Treatment with Contrexeville water is better at the place itself than at home. More than eight glasses—about 2½ litres—a day is not recommended. To complete the treatment at Contrexeville it is sometimes advisable to continue taking the water at home.

SPECIFIC DIRECTIONS FOR USING WATER IN NERVOUS DISEASES.

Dr. F. Peterson (*American Journal of the Medical Science*) says:

Anæsthesia (cutaneous.—Short cold jet and fan douches of strong pressure to the anæsthetic areas. Temperature, 50° to 70°. Duration, one minute. Daily.

Angio-paralytic hyperidrosis of the feet.—Prolonged cold foot-bath with chafing, or fan douche of cold water to the feet. Temperature, 60°. Duration, twenty minutes for bath, five minutes for douche.

Chorea—Cold plunge beginning at 90°, daily reducing until 70° is reached. If anæmic, spinal spray, jet or fan douches, at first warm until patient becomes accustomed to them, then gradually reduced to 60° or 50° (Duval.)

Epilepsy.—Cold shower baths and cold sponge baths daily are beneficial. The shower baths should be rain-like in character—that is not too forcible. In many cases a morning and evening bath (the "half bath") proves very serviceable. The "half bath" is taken in a bath-tub only half filled with water, and when taken should be accompanied by energetic rubbing of the patients by an attendant. This bath lasts five minutes, and the temperature should not be under 50° and not over 70° F. Where there is evidence of hyperæmia and increased blood-pressure in the head, the cold cap is useful.

While these are the general indications for hydrotheraphy, certain measures are often of use at the time of seizures. During a fit or during a *status epilepticus* it will be observed that there is one of two vascular conditions present: either the face is pale and there are signs of brain anæmia, and in this case warm wet compresses should be applied to the head and genitals, accompanied by friction of the trunk upward, the body being placed with head low and arms uplifted; or there is turgescence of vessels in the head, the face is red, the carotids beat strongly, and under such conditions a contrary procedure is indicated—cold compresses to the head, neck and genitals, strong wet beating of the feet, with a high position of the head. Daily applications for thirty seconds.

Headaches, neuralgias and migraines.—If anæmia, heating cophalic compresses (wring out thin linen bandages in very cold water; wrap head in capelline manner, and cover with one or two layers of dry linen or flannel.) Apply at bed-time. Upon removal, envelop head in dry cloth and rub it dry. If hyperæmic, leg bandages (a piece of toweling a yard long is dipped in cold water at one end—one third—thoroughly wrung out, and wrapped closely about each leg, so that the wet surface is next the skin and the dry portion envelops the wet two or three times; or wet stocking may be put on and covered with dry towels.) These are applied at bed-time and retained through the night. In many headaches, especially of a congestive character, a prolonged cold foot-bath (twenty minutes, 60°) or the fan douche to the feet (five minutes 60°) is very palliative.

Hysteria.—For erethetic type: Wet pack, 60° to 70°, for one hour or more, followed by massage (Putnam Jacobi;) or the rain-bath at 75° to 65° for thirty-five seconds daily at twenty pounds pressure (Baruch.)

SOCIETY REPORTS.

THE AMERICAN CLIMATOLOGICAL ASSOCIATION.—ELEVENTH ANNUAL MEETING.

Washington, May 29–June 1, 1894.

Dr. Andrew H. Smith, New York, President of the Association, after a brief introductory address, read a paper on

ALIMENTATION IN PULMONARY DISEASE.

The problem of alimentation, in pulmonary affections, is complicated by special conditions growing out of the functions of the affected organs. We are too apt to regard nutrition as if it were only another term for digestion, and practically to assume that, if the food taken into the stomach goes through the proper changes in the alimentary canal, and the nutritive portion is properly taken into the blood, that is all with which we need have concern. The products of digestion when received into the circulation are not blood. They represent neither serum nor corpuscles; they are, in fact, dead matter, requiring to be vitalized by the process of assimilation before they become a part of the living blood.

Though we know almost nothing of the manner in which this change takes place, we do know that an essential factor is the process of oxygenation which takes place in the lungs. Material which has not undergone this change is, for the time being, not only useless to the economy, but a hindrance to proper metabolism.

If, then, a considerable obstruction exists to the entrance of air to the lungs, it follows that an addition of more nutritive material in the blood than can be acted upon under the circumstances of crippled respiration, will only add to the circulatory embarrassment and aggravate the condition.

Under these circumstances, therefore, we should study in acute cases to give as little nourishment as will sustain the vital powers, rather than as much as the stomach can be made to digest.

If we pass to chronic affections of the lungs, the same principle will hold good, with certain important modifications in practice. We have a chronic condition in which we are confronted with a restricted hæmatosis on the one hand and urgent necessity for a high degree of nutrition on the other. The difficulty of reconciling these two conditions will be in proportion to the degree of lung insufficiency.

In the minor degrees of chronic lung insufficiency the respiratory movements make up in frequency what they lack in amplitude. But sooner or later a time comes when the respiration is so far impaired that enough oxygen cannot be taken into the blood to act upon such an amount of nutritive material as is necessary for the full maintenance of the economy. The moment this stage is reached, the appetite fails in proportion to the defect in hæmatosis. Unless we can improve the hæmatosis, and with it the whole process of metabolism, we shall only do harm by high feeding. Digestion in these cases fails as well as assimilation. Moreover, in these chronic cases with pronounced anæmia and emaciation, we cannot rely chiefly upon nitrogenous food, as we must do in acute affections of the lungs. The heat producing hydrates and fats are required in addition, and these are more difficult of assimilation. A vicious circle is established, the defective hæmatosis aggravating the dyspepsia, and this in turn resulting in greater poverty of the blood. Under these conditions, life in the open air is of the utmost importance.

The speaker has obtained much benefit in cases of this kind from rectal injections of defibrinated blood. This material seems to be absorbed almost unchanged, the corpuscles as well as the serum; it being a frequent experience that no trace of blood is found in the next dejection. There being no digestive action upon the blood,

its absorption into the venous circulation is almost equivalent to transfusion very slowly performed; and but little change in the way of hæmatosis is required to fit the added material for the immediate use of the tissues.

Dr. Smith described a case of pythisis treated in this way. There was an enormous cavity at the summit of the right lung; the patient was emaciated to the last degree, weighing only 101 pounds. After two weeks of the treatment with blood enemata, he gained seven pounds. At the end of three months he left the hospital; the cavity of the lung had contracted greatly; expectoration had nearly ceased; he had gained 33 pounds.

DR. SMITH said: Though defibrinated blood is preferable for this purpose, good results may be obtained with the materials usually employed for rectal feeding, provided the patient can live much in the open air.

DR. KARL VON RUCK referred to twenty or thirty cases in which he had used defibrinated blood, carefully observing the blood condition of the patients. In one case the percentage of hæmoglobin increased from fifty to over one hundred, the number of red blood corpuscles from 3,300,000 to five millions and over.

In a paper on

THE RELATION WHICH ALIMENTATION SHOULD BEAR TO OXYGENATION IN LUNG DISEASES

DR. BOARDMAN REED, of Atlanic City, concurred fully in the opinion of Dr. Smith, that any excess of food beyond the amount which can be perfectly digested and assimilated is injurious. When the intake of oxygen is large, as in the case of a robust person exercising actively in the open air, a maximum amount of food can be safely given. When, on the other hand, a patient has one or even both lungs crippled, the amount of food which he can digest and thoroughly oxidize into a nutritive pabulum for the use of the economy is much less. Between these two extremes are found patients with all possible degrees of capacity and opportunity for absorbing oxygen, and in consequences equally varying degrees for digesting and assimilating food. Evidently, then, there is such a ratio as has been assumed.

Dr. Reed gave a full report of six cases, four of which are now either well or convalescent, concerning which he says: The results are considerably better than when it was my practice to encourage the fullest feeding of consumptive patients. They have been obtained with the aid of so little internal medicine, and that addressed almost exclusively to the digestive tract, that the management of the diet and hygienic regimen generally should receive the credit.

In the treatment of pythisis pulmonalis, it is of paramount importance to look closely to the blood-making processes by securing as perfect digestion as possible, together with a complete oxidation of its products, so as to spare the lungs from the injurious task of assisting in the excretion of the poisonous compound resulting from suboxidation and decomposition. To obtain these ends satisfactorily, the total amount of aliment ingested must not be in excess relatively to the amount of oxygen absorbed. Dr. Reed considered the importance of selecting a special climate for such diseases greatly over-estimated.

The substance of the paper by DR. GLENTWORTH BUTLER on

THE METHODS AND VALUE OF SUPERVISED EXERCISE IN THE PROPHYNAXIS OF PULMONARY PHTHISIS,

was as follows:

Pulmonary tuberculosis is essentially a disease of defective nutrition. Although of microbian origin, a certain vulnerability of the tissues precedes and underlies the bacillary growth. The same individual may be at one time vulnerable, at another time invulnerable, as shown by the onset and arrest of the disease. The therapeutics of this disease demands that every possible means be employed to strengthen the resisting power of the tissues. Aside from measures designed to prevent tuberculous infection, these means may be thus enumerated; climate; abode and out door life; medication, general and local; personal hygiene and habits of life; diet; exercise, general and local, with its corollary, rest.

For the pretuberculous status and incipient cases, one of the valuable resources for permanently increasing vital capacity is "pulmonary gymnastics." The appreciably best method of taking such ex-

ercise is under the instruction and supervision of a trained operator, acting under general directions from the physician. This method admits of beginning with the gentlest exercise and progressing to the severest, in accordance to the patient's varying condition. It ensures the patient's attendance and economizes the physician's time. Graduates of physical culture schools, qualified to give this training, can be found in all of the larger and most of the smaller towns and cities.

The paper embraced a detailed discussion of the physiologic effects and relative advantages of the use of compressed air, breathing tubes, and voluntary exercise, with a report of cases, and a series of photographs from the living model.

Dr. E. O. Otis, in the discussion following, said: What we need especially to impress upon the physician who treats pulmonary tuberculosis is a study of modern gymnastic methods, and the fact that they are now established upon as careful and as scientific a basis as is the use of any of our drugs. The practitioner who treats any considerable number of cases of phthisis is bound to study the application of chest gymnastics as he would the effect of any drug he uses.

On the second day of the meeting Dr. Vincent Y. Bowditch gave a report of

THREE YEARS' EXPERIENCE IN THE SANITARIUM TREATMENT OF PULMONARY DISEASE, NEAR BOSTON.

He reported twenty-five per cent. of arrested cases and thirty-three per cent. of improved cases.

Dr. Karl Von Ruck made a plea in favor of institution management of these cases. He believed that the ordinary method of sending a patient to a distant climatic resort, leaving him there to consult a physician only when he thought best, which was usually when he suffered a relapse, under no regular treatment, dependent entirely upon the beneficial climate, to the utter exclusion of all other aids, was bad.

Dr. John H. Musser, Philadelphia, protested against the organization of institutions for the treatment of consumptives, within city limits.

Dr. R. G. Curtin, Philadelphia, in a paper on

CREOSOTE, GUAIACOL, AND BENZOYL OF GUAIACOL IN PHTHISIS

gave a brief résumé of observations in the use of these drugs, covering a period of fifteen years.

He said: "In acute catarrhal phthisis with high temperature, little or no good is to be expected from the use of guaiacol in acute tuberculosis, no material benefits results from its employment. The class of cases that seem to be most benefited is the one in which we have slight elevation of temperature, with poor nutrition, slow digestion with fermentation. Guaiacol has no specific effect upon the bacillus. In cases where the process was slow, beneficial results followed the use of guaiacol."

Dr. Curtin's conclusions were as follows:

Guaiacol is not so irritating to the stomach as creosote. Guaiacol is not so liable to produce irritation of the kidneys, nor to be followed by hæmaturia.

Among the advantages of guaiacol are: first, it is more easily taken; second, the process of manufacture insures purity; third, the exact quantity of medicinal substance administered is known.

In the ensuing discussion, Dr. Alfred L. Loomis, New York, said: I do not believe these drugs have any effect upon the pulmonary disease, except so far as they improve the nutrition of the patient by facilitating his digestion. I am quite sure they have no specific action. I have constantly patients coming to me, fully under the influence of this drug, so the odor can be detected in the breath and perspiration, who seem to do just as well without it, and, in some instances, better, on account of its prolonged use disturbing the stomach. Whether we shall gain something by the use of the vapor, seems to me still unsettled. We cannot use it hypodermically. We find no evidence that it has any other effect than to aid assimilation and digestion in a certain class of individuals.

"SHALL ANYTHING BE DONE BY LEGAL AUTHORITY TO PREVENT THE SPREAD OF TUBERCULOSIS?"

Dr. Frederick I. Knight, of Boston, under this heading, called attention to the fact that though twelve years had elapsed since the infectiousness of tuberculosis was established beyond question, very little

had been done to prevent its spread. This was attributed by Dr. Knight not to a want of belief in the infectious nature of the disease, but to the magnitude of the problem and manifest difficulties in dealing with it. Dr. Knight claimed, however, that boards of health were organized to keep people informed, and not in ignorance of dangers in their midst, and gave notice that in the business meeting he should introduce a resolution calling upon this subject.

The discussion of this address was of much interest. Regret was repeatedly expressed as to the present constitution of boards of health in this country and their association with politics. The Massachusetts Board was referred to as being exceptionally fortunate in its chairman.

The resolution offered by Dr. Knight was unanimously adopted. It was as follows:

Whereas, the American Climatological Association was founded, among other objects, to promote the study of the nature and treatment of diseases of the respiratory organs; and *whereas* tuberculosis is the most fatal cause of such diseases; and *whereas* modern research has placed this disease among the communicable, and hence to some extent, at least, among the preventable diseases:

RESOLVED, that this Association do strongly recommend the medical profession of this country to promote measures tending to its prevention.

The objection that is so often made on the part of the people, and also on the part of practitioners, that the dissemination of the knowledge of the infectiousness of tuberculosis stamps the consumptive as an outcast is irrelevant, and it does not hold good. The people are well aware that the patient is not responsible for his disease; and the feeling of sympathy for the consumptive would overmatch any feeling of terror or depression that the people might have for him.

A paper on

SOME PATHOLOGICAL CONDITIONS OF THE HEART AND THEIR RELATION TO DIABETIC COMA

was read by DR. LEONARD WEBER, of New York.

He said that among the sixty cases of diabetes mellitus which he had treated in the course of his practice, he has seen a number die in coma. It is true that the majority of these were the well-known forms of diabetic coma brought about by acid intoxication of the blood, as it is supposed, by acetone and, especially, diabetic acid, but in addition also through the poisonous effects of ptomaines produced by the putrefactive processes so frequently occurring in the alimentary canal of diabetic patients; but quite a number go into collapse through deficient cardiac action, by disease of the heart developing in the course of diabetes, as already pointed out by Frerichs. In these cases there are generally no turbulent symptoms, but syncope followed by cardiac death. They might properly be named collapse-coma, as distinguished from the more frequent forms by blood poisoning. The causes of neuro-muscular disease of the heart in diabetes are manifold.

In the management of diabetes Dr. Weber believes it to be good practice to allow the patient a certain daily amount of carbohydrates as soon as the disease has been gotten under control, and has found this amount to be about three ounces. An absolute meat diet cannot be maintained very long on account of disturbing digestion, and placing the patient in danger of coma.

Every case of diabetes is to be investigated and studied by itself, and the treatment and management adapted to individual requirements. In addition to carefully regulated diet and mode of life, Dr. Weber has prescribed salicylate and bicarbonate of soda (gr. xv each) before meals, or Carlsbad water instead. Where the alkaline treatment did no good, or did not agree with the patient, he has ordered opium in small doses with benefit. In every case he saw good service from the use of massage judiciously applied, and the frequent use of baths. It is by the latter two remedies that the heart is kept fairly strong and active in this disease, which is as yet not curable, but manageable.

DR. GLENTWORTH R. BUTLER, Brooklyn; The generalization made in Dr. Weber's paper that the disease known as diabetes is merely a symptom of some underlying condition, is very valuable. Regarding the disease we call diabetes as a symptom, leads us to search for the under-

lying cause, and tends toward a more rational treatment.

In regard to diet, I can corroborate Dr. Weber's opinion that the very strict so-called diabetic diet is not always of service. In my own work, in a number of cases, the strict nitrogenous diet was not well borne, even though it caused the disappearance, partial or complete, of sugar in the urine. The general condition is impaired on the strict diabetic diet. The patient should have a fair variety of food, watching the general condition, and not giving up altogether the carbo-hydrates and the saccharine substances.

DR. ROBERT H. BABCOCK, of Chicago, presented

A REPORT OF CASES OF CHRONIC HEART DISEASES TREATED BY THE SCHOTT METHOD OF BATHS AND GYMNASTICS.

The purpose of this report was to call attention to the value of baths and light exercises in cardiac therapeutics, by which it is believed patients suffering with organic heart disease of chronic nature may be more promptly and lastingly improved than by drugs. A statement of the raionale and application of this system was given. With regard to the baths, Dr. Babcock said: "The improvement in the rate and quality of the pulse is an index of the degree of benefit derived by the patient. If not counteracted by exercise, this effect on the pulse will persist for an hour or two subsequently. Changes for the better in the size of the area of cardiac dullness and in the sounds may be noted likewise. This was demonstrated repeatedly last year both on myself by a competent Russian physician, and by myself on others. Careful percussion immediately before and after a bath of eighteen to twenty minutes' duration, showed a demonstrable retraction of the deep limits of cordiac dulness and the heart sounds were improved in strength, the second pulmonary being less accentuated, the second aortic stronger—in short, the abnormal difference between the two sounds before, being appreciably less marked after, the bath. Murmurs that are almost inaudible before become intensified; and conversely, some loud bruits are lessened in intensity. In short, so far as can be determined by physical examination, these baths appear to lessen the rapidity and increase the force of the heart's contractions, thereby occasioning a better filling of the great arterial system with corresponding depletion of the engorged veins."

The exercises supplement and reinforce the treatment by baths.

In a detailed report of 19 cases, 13 showed more or less improvement.

Contra-indications: "There can be no doubt of the danger of this form of treatment in degenerative changes of the blood-vessels and myocardium, such as aneurism and advanced arteriosolerosis, acute softening and great fatty degeneration of the heart."

DR. CHARLES E. QUIMBY, New York, referring to the subject discussed by Dr. Weber and Dr. Babcock, said: I have long felt that there is a fundamental defect in present methods of treating organic cardiac disease. We are constantly using the whip to stir up an overworked muscle. Digitalis, and the most of the so-called cardiac tonics are pure stimulants, furnishing in themselves no additional force. In the use of the nitrites, we do attempt something from the other side in the way of diminishing in the vascular resistance. Yet in so doing, we interfere directly with general nutrition, for the arterial contraction which follows every retardation of circulation from organic disease is only the physiological reflex that is intended to be compensatory and to restore the normal vascular flow. It is universally recognized that rest is the one absolute essential for the restoration of an exhausted or failing muscle. In the case of the heart, this can be at the best only relative, and however slight must entail a proportionate loss in the circulation. The ideal cardiac tonic is therefore mechanical: a force which can be substituted for that of the heart muscle, and made to maintain the circulation with a diminished expenditure of cardiac force. Some unusual results in the treatment of cardiac disease by means of mechanical measures lead me to believe this ideal is in a degree attainable. I can do no more than refer to it at present, as I hope at no distant date to embody my conclusions in full in a paper on the subject.

A NEW AND DISTINGUISHING SIGN OF LATENT ANEURISM OF THE AORTA

was the subject of a paper by DR. W. C.

GLASGOW, St. Louis. The sign referred to is the presence of a systolic sound, or thud, in the brachial artery, synchronous with the systole of the heart. This sound is sometimes accompanied by an arterial murmur. When this sound can be heard, aortic regurgitation can be excluded. Dr. Glasgow claimed that a positive diagnosis of aneurism can be made, even in the absence of all other signs or symptoms. Dr. Glasgow reported five cases of aneurism in which this arm sign could be heard. He also exhibited a patient from one of the Washington Hospitals who showed this sign.

DR. CHARLES E. QUIMBY, of New York, read a paper on

OZONE IN PHTHISIS, WITH ESPECIAL REFERENCE TO THE PNEUMATIC CABINET.

THE COMPARATIVE RARITY OF PHTHISIS IN THE HIGHLANDS OF PENNSYLVANIA AND THE ADJACENT COUNTIES OF NEW YORK.

by DR. GUY HINSDALE, Philadelphia, called attention to the low mortality from consumption in a district falling partly within New York and partly within Pennsylvania, embracing an area of 12,000 square miles. Throughout this region, there is, according to the best available information, a population of over 1,000 persons living to each annual death from phthisis. The Highlands of Pennsylvania particularly referred to, embrace the counties of McKean, Potter, Forest, Clarion, Elk, Cameron, Union and Sullivan. This entire region has an elevation of from 1,200 to somewhat over 2,000 feet; it is characterized by extensive forests, a dryer air, and lower temperature than prevails at the seaboard or lake shore.

As a member of a committee of the Association appointed to collect meteorological data of the resorts of this country DR. SAMUEL A. FISK, of Denver, read a paper giving

SOME METEORLOGICAL DATA OF COLORADO.

He claimed for Denver (or the region for which it stands) the advantages of elevation, atmospheric dryness, a small annual precipitation, a cool climate, a prevailing mild wind of only moderate velocity, and an open sky.

HON. MARK W. HARRINGTON, chief of the Weather Bureau, read a paper on

SENSIBLE TEMPERATURES

which aroused much interest. In his introduction, Prof. Harrington said: "The subject is so new that I am obliged to invent some terms to describe it." By "sensible" temperature, he explained, is meant that which is felt at the surface of the skin, especially where the skin is exposed as on the face and hands. To change a definite quantity of water from the liquid to the vapor state requires the utilization of a definite quantity of that form of energy which we call heat. On evaporation, this heat changes to other forms of energy; it is no longer sensible, and a sense of coolness results from its change. Thus is caused a reduction of temperature at the spot where the evaporation takes place; and while the evaporation continues, the surface from which it takes place is cooler than the general air temperature.

The reduction of temperature caused by evaporation depends on the rapidity with which evaporation takes place, and this, in turn, on the amount of moisture already in the air. In general when the air is saturated with moisture (that is, when the shade-temperature and dew-point are the same,) there is no evaporation, and the reduction is zero. When the air is supersaturated, condensation, the reverse of evaporation, takes place, heat is released, and instead of a reduction we have an addition to the temperature. But when the air is not saturated, a reduction of temperature takes place.

The amount of this reduction will be greatest where the air is driest, least, where the air is moist. In Washington, Philadelphia or San Francisco, the moisture is abundant, evaporation is relatively small, and hot weather feels hot. On the other hand, at Denver, Santa Fe or Prescott, the moisture is generally scanty, especially in hot weather, and the reduction is great. The most extreme case easily accessible is that of Furnace Creek, Death Valley, Cal.

It appears that in arid regions, the reduction may make hot weather not only

endurable but even agreeable and refreshing.

So far it has been only a question of temperatures in the shade. Temperatures in the sun are always higher, and may be very much higher. On a hot summer afternoon, a temperature of 130° in the direct sun's rays is not rare in any latitude of the United States. Sometimes this temperature reaches 140°, and occasionally it is even higher. The conditions for sensible temperatures already stated do not apply in such cases in part, it may be because of the failure of sufficient perspiration to give free evaporation; in part, because of the special effects which strong and direct insolation has on organic structures.

To obtain the beneficial effects of the reduction of temperature by evaporation, the shade must be sought, and the direct sun's rays avoided. The effects may be heightened by a natural or artificial breeze or wind; and for the parts of the body covered by clothing they may be obtained by adapting the clothing to the free passage of air and moisture.

Dr. Judson Daland, Philadelphia, gave a detailed report of three cases of

BERI-BERI,

with examination of the blood. The greatest interest in these cases surrounds the question of etiology. Beri-Beri has been observed in Japan, portions of Africa, and in the East and West Indies, and, as has been shown by Scheube and Baelz, it is an endemic peripheral multiple neuritis. Muira believed it to be due to fish, especially decomposed fish, while others attribute it to rice. These cases tend to bear out Muira's theory. The food of these men was almost exclusively fish and rice; some of the fish was dried; much was spoiled; the quantity was insufficient. The main facts, as given by Dr. Daland, seem to point conclusively to poisoning by some substance in rice or decomposing fish, probably of the nature of muscarin.

These three cases recovered, as did eight others, in the Brazilian Navy, reported by Dr. Gihon.

The whole tendency of opinion during the entire sessions seemed to be towards physiological treatment, the use of therapeutic means which are in the line of natural processes rather than the use of drugs, substances which are foreign to the organism.

How to Give a Fomentation.

Only those who have not tried the remedial effects of water, both hot and cold, doubt its efficacy in many forms of disease. It is perfectly safe to apply a fomentation in cases of severe pain befor a physician is summoned, and very often it relieves the sufferer before he arrives. This is the way to do it: Take half a dozen thicknesses of flannel large enough to more than cover the seat of the pain, fasten them together, for convenience in handling, wring them out of very hot water (use a clothes wringer to save the hands) and apply as hot as the patient can bear it. A dry flannel may be put between the skin and the wet cloth, if preferred, and over all a large flannel should be placed to keep the heat in. When the cloth begins to feel cold, it should be wrung again. Three or four applications will generally relieve a stiff neck or an attack of rheumatism in a joint.

A fomentation may be needed when there is no hot water in the house. It may be quickly prepared by wringing out the flannel compress in cold water, laying it between the folds of newspaper and putting it on a hot stove or holding it around a stove pipe until hot. The paper protects the cloth, and when steam begins to come out can be easily removed.

Tonic Mixture.

℞

Wine of kola		
Wine of cinchona		
Wine of gentian		
Wine of colomba	āā	250 grms
Fowler's solution		10 drops
Tincture nux vomica		5 drops

A claretglassful after each meal.

—*Ibid.*

Absolute Alcohol in Erysipelas.

Dr. A. J. Oschsner (*Revue Internationale de Bibliographie Medicale*, No. 12, 1894,) has employed local applications of absolute alcohol in the treatment of erysipelas with the best of results. In twenty-four hours the temperature falls to the normal and the redness decreases considerably. This favorable action is said to be due to dehydration of the tissues and coagulation of the albumen by the alcohol. Mixed with water the alcohol will not act thus.

CURRENT LITERATURE REVIEWED.

IN CHARGE OF ELLISTON J. MORRIS, M. D., AND SAMUEL M. WILSON, M. D.

BRITISH JOURNAL OF DERMATOLOGY

or July contains an address on

the Typhoid Treatment of Skin Diseases

by Dr. Byrom Bramwell.

Owing to the great improvement noted in the skin of cases of sporadic cretinism and in myxœdema treated by typhoid extract, the author began using this agent in various kinds of skin diseases.

In psoriasis the author has had good results and feels justified in increasing the dose until a decided effect is noticed; but as some persons show great susceptibility to the drug, the commencing dose must be a small one. In other skin diseases it has not been possible to give a very extended trial to the remedy—it was used in only one case of chthyosis; but in that instance gave strikingly good results; in chronic eczema prompt improvement in one case, none in another; in acute eczema the effect seemed bad; in one case of pemphigus there was improvement, but the author inclines to credit hygiene and local measures more than the thyroid extract, so also in a case of exfoliatine dermatitis, although it seems theoretically to be suited to remedies of this class.

The author seems to think the thyroid acts through the nervous system, although he acknowledges that his reasons are theoretical only, and thinks it probable that the symptoms of Morvan's disease, sclerodactylia, anæsthetic leprosy, and syringomyelia would be relieved by its use.

For various reasons the tabloids of extract are preferred to the gland raw, or partly cooked, and the dose given varies both with the individual, and the disease he suffers from. In lupus and similar disorders, where the drug will be used for a long period the dose must be small; in psoriasis and ichthyosis where a rapid effect is desired and a large dose (running sometimes as high as thirty or forty or more fine grain tabloids daily,) is necessary. Extreme susceptibility to this drug is rare in cases of skin disease, but common in myxœdema, etc., and causes the following symptoms: headache, deranged stomach, diarrhœa, vomiting, acceleration of the pulse, rise of temperature, sometimes the symptoms of exopthalmic goitre (palpitation of the heart, and discomfort in the cardiac region, dyspnœa, etc. Suppurative lesions of the skin, though rare, may result, and in cases of diabetes the polyuria is apt to increase.

This paper was accompanied by a history of numerous cases, and photographs and drawings.

IN THE JOURNAL OF NERVOUS AND MENTAL DISEASE

for July, an address before the fiftieth annual meeting of

The American Medico-Psychological Association

by Dr. S. Weir Mitchell.

This paper criticises the methods still in use in asylums for the insane. In may cases the inmates are confined in groups, or separately, without work of any kind, with very little outdoor exercise, under nurses who have had no training to fit them for the position, One reason for this state of things is that superintendents of asylums live in the institutions apart from the rest of the profession and are not kept in touch with it by rivals, by young residents criticising them, etc.

The part politics is allowed to play in placing superintendents and residents in their places is greater in insane asylums than in general hospitals with the result of making the service less efficient, and the author proposes that this be remedied by competitive examinations.

In many asylums, again, the general medical treatment of a patient is utterly neglected—the modern means of diagnosis by blood examination, the microscope, ophthalmoscope, etc., are not in general use, and a case is mentioned where a question in regard to the electrical reactions in a special case was seemingly not understood.

The beneficial effect of steady outdoor employment on a number of patients in an asylum was instanced, and finally the views of a number of neurologists and other prominent and experienced physicians were quoted, and their views coincided with those expressed in the body of the paper; that the medical chief should command a salary large enough to attract a competent man; that he should have a large corps of competent assistants; that politics should play no part in the selection of these; that abundant work or interesting recreation be provided for patients; and that the business and medical supervision be in charge of two different men; and that training schools for nurses be established, and the nurses kept moving from ward to ward or from one institution to another until competent to command good wages outside.

EDINBURGH MEDICAL JOURNAL

for August contains

Three Cases Illustrative of Herman Freund's Law of Pedicle Torsion in Ovarian Tumors,

by Dr. A. R. Simpson.

The author cites three cases confirming the theory that there is a tendency for tumors situated in the right side of the body to rotate toward the left and for those in the left side to take the opposite direction. The first case was a dermoid of the right ovary with its pedicle twisted toward the left, and was in-

teresting from the family history that the mother and two aunts and a great aunt of the patient had suffered from dermoids of the face, or cancer of the uterus or mamma.

The second case complained mainly of the mechanical inconvenience caused by a large tumor which was found in removal to be attached to the left ovary, and twisted to the right.

The third case had a history of leucorrhœa, acting in back and limbs, longstanding dysmenorrhœa, etc. A parovarian cyst growing from the left side, twisted toward the right, and lying in the right side of the abdomen was found and removed. The uterus was three months pregnant and pregnancy terminated naturally at term.

Super-involution had been found in the second case, and the author thinks this a common accompaniment of tumors situated anywhere.

Dr. F. W. N. Haultain describes his experience in

The Electrical Treatment of Uterine Fibroids and Subinvolution.

The author applies his treatment only in cases where the uterus appears to be the organ mainly at fault, and distinctly enlarged. Cases where the ovaries are plainly diseased are treated by ovariectomy or some other procedure, and one or two cases are mentioned where the ovarian trouble was less obvious than the uterine, but where a failure of electricity led to a successful excision of the ovaries.

The author applies to the abdomen a piece of flannel twelve inches square soaked in salt-solution and in contact with a zinc plate connected with the battery—the intra-uterine electrode being platinum pointed and with a piece of rubber tubing to act as a sliding insulator.

When there is no bleeding, the negative pole is introduced into the uterus; as it is less painful than the other, but the positive pole is required if there is hemorrhage.

Most of the cases had already been curetted and cauterized without success, and although the author does not claim a cure in every instance, he says that the uterus was reduced in size in every one of his cases. Mental and physical vigor seem to be increased after a few applications have been made.

Probably the great benefit in this class of cases arises from the muscular contractions excited and from the decreased capillary circulation.

Dr. R. W. Irvine reports a case

Illustrating the Value of an Aseptic Blood Clot.

The patient was a boy who sustained a compound comminuted fracture of the tibia with rupture of the anterior tibial artery. Free hemorrhage ensued of course, but when the case was seen this had stopped and as the ends of the artery were not visible the larger bone fragments were cut in apposition, a few smaller ones removed, and a dressing of corrosive wool covered by a fenestrated splint of corrugated paper applied. Secondary hemorrhage occurred, but this having ceased when the case was seen again the dressing was reinforced without being removed.

On the third day, and at each subsequent dressing the clot was exposed, dusted with powder of iodoform one part, boracic acid seven. On the ninth day the last shred of the hardened clot was removed, leaving a small, clean, granulating surface. There was at no time any odor, and the results were so good that the patient plays foot ball, dances, etc., which result the author does not think would have followed if he had disturbed the wound to ligate the artery, and so have removed the protecting clot.

Dr. A. S. Miller describes

A Method of Excising the Wrist Joint

proposed to him by Dr. Henon Matson.

The knife enters toward the palman aspect one and one-half inches above the styloid process of the ulna and is carried down three inches reaching the metacarpal bone of the little finger, and passing along it for a short distance. At least an inch of the lower end of the ulna is now removed, then the carpus piece by piece leaving only the trapezium, then the heads of the metacarpal bones, and the end of the radius sawn off. Finally the trapezium is examined and, if sound, allowed to remain. A vessel at the radial side of the wound is best secured by turning the wound inside out.

The author packs the wound with iodoform gauze and begins passine motion in at most a week after the operation. The metacarpophalangeal joints are usually stiff before the operation, and should be freely flexed and extended as a preliminary to it.

The advantages claimed for this mode of operating are:

The single incision, and the slight deformity resulting, the efficiency of the drainage, and the ease of performance.

Other papers in this issue "The Commoner Varieties of Lupus Vulgaris and Their Treatment," by Dr. Norman Walker. "Pathological Report of Dr. Byrom Bramwell's Case of Cancer of the Breast, Spleen, etc.," by Dr. R. F. C. Leith. "The Relationship Between Ulcerative Colitis and Granular Kidney Disease," by Dr. Gilbert A. Bannatyne. "Note on the Presence of Different Albumoses in the Amniotic Fluid," by Dr. A. Lockhart Gillespie.

IN THE PHYSICIAN AND SURGEON

for July Dr. G. H. Sherman has a paper which he read before the Detroit Medical and Library Association on the

Eradication of Contagious Diseases.

The authur holds that so long as quarantine laws are enforced against such diseases as scarlet fever, and diphtheria, without compensating the families for loss of time, etc., there will be a general attempt to evade them, and their object will fail to a great extent.

The desire to evade these laws is particularly well seen when the disease breaks out in a dwelling connected with a bakery, ice

cream saloon or some similar resort, and of course these are the places where the worst results will follow.

The failure of the measures now in use seems due to the neglect of physicians to report the mild cases, the neglect of parents to call in physicians in cases they consider mild, fearing the quarantine, and the carelessness of neighbors who visit the sick saying they are not afraid of the disease.

The author proposes that the State Boards of Health take the matter up, and after satisfying themselves that no fraud is being practiced pay the quarantined families a stipulated sum weekly, while under restraint. In this way there would be an object to report a case at once and the restrictions could be carried out with the full cooperation of all concerned. The author thinks the money now expended for the same object would eradicate the disease if used in this way.

In his "Leipsic Letters" Dr. Collins H. Johnston describes the method used by Prof. Epstein in his Prague clinic for detecting worms in children,

He passes a catheter a short distance into the rectum and microscopically examines the fecal mass removed for the ova. The ova of round worms pass away so constantly that they are uniformly distributed in the feces and their absence proves the absence of the worm. Tapeworms he says deposit eggs also but less regularly than the other variety, so that it requires several examinations to declare the absence of these.

Other papers in this issue are: "An Address on Anthropology and Ethnology," by Dr. Edward C. Mann. "Urethral Stricture—Cause and Treatment," by Dr. Frederick W. Robbins, and the report of a case in which severe nervous symptoms were relieved by treating the eye, by Dr. John S. Owen.

PERISCOPE.

IN CHARGE OF WM. E. PARKE, A.M., M. D.

MEDICINE

Muscular Rheumatism.

According to Leube (*Deutsche Med. Woch.*) muscular rheumatism is not a local disease, but a general infective disorder with special localizations in the muscular system. The mode of onset of the disorder varies, but is sometimes marked by shivering and prodromal fever, and by malaise of some duration. In some cases muscular pains may be widespread, and occasionally endocarditis is observed. Taking a series of about 200 cases, he found that fever was present in about one-third; it was seldom higher than 102° F., and generally fell after two days in hospital either rapidly or after some irregular fluctuations. In one-sixth of the cases there was a cardiac murmur at the time of admission, it is generally supposed that endocarditis; which is so common a "complication" of joint rheumatism, scarcely ever occurs in relation with muscular rheumatism. It is not possible to say in how many of the cases in which a murmur was observed this was present before the onset of the muscular rheumatism, but it was noticed that in half the cases the murmur grew fainter or disappeared while the patient was under treatment, and that whereas in all the cases together fever was observed in one-third only, it was present in two-thirds of those in which there was a murmur. Moreover, in a few cases the murmur was observed to appear after the onset of the muscular rheumatism. Three such cases are related by Leube, but in one there was at a later stage muscular rheumatism and in another the patient, at the time the muscular rheumatism came on, was under treatment for gonorrhœal urethritis, vaginitis, and cervical endometritis. Leube states that he has seen joint rheumatism in several cases, and points out that muscular rheumatism is frequently observed after affection of the joints. Pleurisy was in a few rare cases observed as a complication of muscular rheumatism, but albuminuria only once. Leube concludes that it is highly probable that the infective material in muscular rheumatism is an attenuated form of the virus of acute rheumatic arthritis. In Wurzburg, where his observations were made, the cases of muscular rheumatism coming to the clinic were, as a rule, few in number and isolated, but at one time recently a large number of cases applied, so that half a ward was filled with them; this would appear to indicate an epidemic influence. He only mentions the question of treatment incidentally, but would seem to have relied on salicylate of sodium.—*Brit. Med. Jour.*

Treatment of Inoperable Carcinoma of the Uterus.

Dr. Bernhart (*Amer. Jour. Med. Sci.*) Dr. B. (*Centralblatt fur Gynakologie*, 1893, No 39) has obtained highly satisfactory results from parenchymatous injections of salicylic acid in alcohol (6 parts of the acid and 60 parts of the alcohol.) About 30 minims are injected into the neoplasm in eight or ten different places Some patients complained of severe pain during the injections, while others had none at all. There were slight elevations of temperature. The results observed were as follows: Within three days after ulcerating nodules had been thus treated the ulcerations had healed, and there was marked retraction at the sites of the punctures. After repeated

injections (at intervals of four days) the affected nodules had greatly shrunken and presented a smooth surface on which epithelium later developed. Meantime the patient's general health improved, pain and foul discharges ceased, and there was no further hæmorrhage. These results were obtained in six cases of inoperable carcinoma of the cervix, though the patients had not been kept under observation long enough to report as to their subsequent condition.—*Am. Med. Surg. Bulletin.*

Some Common Mistakes in the Treatment of Syphilis.

Dr. George H. Fox read a paper on this subject. Many physicians, Dr. Fox said, hold to the belief that syphilis is an incurable disease. On the contrary, the disease in every case tends to run a natural course and get well of itself. If a person suffering from syphilis inherits a sound constitution and takes care of himself, the prognosis is extremely favorable even though no treatment whatever is adopted. With the methods of treatment at our command, no disease furnishes such good results.

Another common mistake arises from the belief that mercury and potassium iodide are practically the only remedies we have at our command in the treatment of syphilis. While they are both very potent remedies, yet complete reliance on them often causes serious injury to the patient. In anemic patients iron should be regarded as an antisyphilitic remedy. In strumous individuals, cod liver oil is very serviceable. The alleviation of mental anxiety and the adoption of hygienic rules are of the utmost importance in certain cases. The mistake is too frequently made that we treat the disease instead of the patient.

Another fallacy is the belief that a certain definite period of time is required to effect a cure. Some say two years, others three, etc. The course of syphilis varies in different individuals, and the period of treatment must likewise vary, according to the severity of the case. One case of syphilis may require twice as much medicine as another, and the period over which treatment should be extended may be twice as long.

Another common error is that many ills occurring in a syphilitic subject are treated as though they were of syphilitic origin. The fact that a patient has syphilis does not exempt him from non-specific disorders, yet the physician is very apt to jump to the conclusion that such disorders are the result of the syphilis, and to treat them accordingly. In many cases lesions on the tongue and oral mucous membrane in syphilitics remain unaffected by specific treatment, and the fact should be borne in mind that similar lesions may occur in persons who have not had syphilis, as the result of digestive disturbance. Even if they are syphilitic, such lesions may persist in spite of specific remedies unless the digestive errors are corrected.—*Journal of Cutaneous and Genito Urinary Diseases, Atlanta Med. and Surg. Journal.*

Chronic Cocainism.

J. B. Mattison, (*Union Medicale du Canada*), the author published a very careful study of the effects of the use of coca or cocaine on the different parts of the organism, as the lungs, the heart, the liver, the kidneys and the nervous system. These investigations prove that some of the properties claimed for erythroxylon coca, as its stimulating action on the nervous and reproductive systems are false, as the coca and cocaine rapidly diminish the sexual appetite. Under the influence of the drug, the temperament is modified, the patient becomes idle, unclean, selfish and neglectful of his social duties, in short, the disturbances produced resemble those of the last stage of morphinism. In South America, many of the people who use coca are phthisical.

In recent cases, the drug may be suppressed suddenly, the pain and insomnia being combated by phenacetine, chloralmid, sulfonal, paraldehyde, and bromhydrate of hyoscine. In cases of long standing, it is better to proceed gradually and replace cocaine by injections of benzoate of caffeine.—*N. Y. Therapeutic Review.*

Migraine.

Frendenberg prescribes:

℞ Hydrochlorate of morphine ..... gr. 1-6
Salicylate of sodium ..... gr. iv
Phenacetin ..... gr. iv

M. One or two such cachets, according to need.

Or, pastilles composed of:—

℞ Saccharin ..... gr. 1-6
Hydrochlorate of quinine ..... gr. 5-6
Salicylate of sodium ..... gr. iiss

One pastille at a dose.

—*Le Progres Med.*

The Relation Between Urticaria in Infants, and Rickets and Dilatation of the Stomach.

Drs. Funk and Grundzach (*Monatshft. f. prkt. Dermat.,*) say our authors are firm believers in a close relationship between urticaria and rickets. In the summer of 1893 they met with forty-five cases of urticuria in children under two years of age, and all of them were rachitic. In all of them there were also digestive disturbances, and this was coupled with evident dilatation of the stomach. They all suffered from colic, constipation, and thirst. In almost all cases they were fed too frequently. The treatment best adapted to these cases was regulation of the feeding and hygiene of the child. In acute outbreaks they administered at night a teaspoonful of a mixture of antipyrin 1.50 gme. (gr. xxii), water and syrup each 25 gme (ʒ vi m xv). Externally they used diluted vinegar followed by powdering. In cool weather lukewarm salt baths were helpful. In summer baths were omitted.—*A. M. S. Bull.*

Nitro-Glycerin in Vomiting.

Dr. R. Humphreys (*Brit. Med. Jour.*) has used nitro-glycerin systematically for the last three years in every form of vomiting he has met with, and as it is a drug which is not incompatible with other drugs likely to be employed under such circumstances, while it has proved of the greatest service, he thinks that it may be as well to record this use of it, as he can find no mention of it as a general remedy in vomiting. In vomiting in gastric catarrh, whether adult or infantile, acute or chronic, alcoholic or anemic, he has found it to act almost as a specific. The vomiting ceases at once. In a case of vomiting of advanced pregnancy, he found it to be of the greatest service, and in some cerebral cases it also markedly checked the sickness. In peritonitis alone it increased the vomiting, not, however, to a distressing extent, and the effect soon passed off. He ventures to suggests that this may prove a point of diagnostic value in doubtful cases. In vomiting in connection with pulmonary phthisis it proved of little value, where atropine stopped it for the time. In combination with catechu, it acted very well in several cases of lienteric diarrhœa. The vomiting of influenza was often relieved by it, though not to the same extent as by atropine. He has seen no bad effects from its use.—*N. Y. Med. Times*, June, 1894.

Fortifying Pills.

℞

Extract of cinchona	
Extract of kola	āā 5.00 grms.
Extract of rhubarb	2.50 grms.
Extract of nux vomica	0.50 grm
Arseniate of iron	0.20 grm
Powdered kola	q. s.

To be divided into 100 pills. Two with each meal.

—*Journal de Medicine de Paris*

The Treatment of Eclampsia.

Krong (*Centralblatt fur Gynakologie*) in discussing the treatment of eclampsia at the Eleventh International Medical Congress at Rome, stated that as long as so little of the etiology and pathological condition of eclampsia is known, a rational therapeusis cannot be formulated, at present it is limited to the combating of the convulsions. The average mortality by this treatment is from 20 to 30 per cent. He believes that while the convulsions are controlled by narcotics, the eclampsia as such continues to exist. The course of the condition can be unfavorably influenced by large doses of narcotics. In the Leipziger klinik the treatment by morphia has been given up for one and a quarter years. Its place has been taken by forcible delivery in the eclampsia of pregnancy or of labor. In Leipzig to the present time there have been eighteen cases with one death,—*i. e.* 5.5 per cent. mortality. By the use of this method there are two points especially to be observed.

(1) The controlling of the hemorrhage.

(2) The observance of asepsis.

In two-thirds of the cases there was more or less violent hemorrhage from cervical tears.

The hemorrhage was controlled in all the cases by tamponnade of the utero-vaginal canal with aseptic gauze. The 20 per cent. iodoform gauze advocated by Duhrssen should not be used on account of the accompanying kidney complication. For the same reason intrauterine irrigation with antiseptics should not be employed from the diminished excretion by the kidneys of any that might be absorbed. Asepsis must be especially and rigidly observed in this operation. Despite the greatest care, over one-half of the operated cases are infected; the infection limiting itself in the most of the cases to the endometrium. Recovery follows in most of the cases rapidly.

The treatment of eclampsia in the Leipziger klinik is the following:

Narcotism only during the operation.

Forcible delivery.

In threatening edema of the lungs, venesection, abstracting 600 to 800 grammes of blood.—*Univ. Med. Magazine.*

Pyoktanin Internally in Malignant Growths of Internal Organs.

Dr. O. Maibaum has tried this drug in the treatment of internal neoplasms of a malignant nature, in Professor Wassliew's clinic, in Dorpat, Russia He administered it three times a day in doses of 6 centigrammes (1 grain), in pill form, or associated with belladonna as a suppository:—

℞

Pyoktanin	gr. j
Ext. belladonnæ	gr. 1-5
Cocoa-butter	gr. xxx

The results were encouraging.—MEDICAL AND SURGICAL REPORTER.

Inflammatory Earache.

℞

Powdered menthol	gr. xx
Camphor	gr. xx
Vaselin	ʒvj

M. ft. ungt.

—*Ibid.*

Poisoning by Illuminating Gas.

The various jokes on the countryman who blows out the gas shows to what an extent this accident occurs and that it is not often done intentionally is the opinion of Dr. John W. Shaw, of Washington, D. C., (*Virginia Medical Monthly*), who believes that 94 or 95 per cent. of cases are due to either carelessness, ignorance or accident.

His theory is that the gas poisons in three different ways. First. By the gas replacing, to a greater or less extent, the atmospheric air, consequently reducing the supply of oxygen. Second. By the direct poisonous properties of the heavy and light carburetted-hydrogen, when mixed with air and absorbed through the lungs. Third. By the collection of carbon dioxide in the body for the want of sufficient interchange of gases neces-

sary to remove it. He thinks that it is the retention of effete material in the system that does the harm and it is as much the carbonic acid gas as the illuminating gas which cripples the blood corpuscles which are not able to carry off the carbonic acid gas, thus overwhelming the respiratory centres and causing death.

He does not believe in the use of oxygen but thinks that transfusion of blood would be the most rational form of treatment in extreme cases, for it immediately supplies the system with the hemoglobin, of which it is in such great need. This, combined with fresh air, artificial respiration, heat, and stimulants, are sufficient to keep one busy until life or death removes the responsibility.

As a stimulant he prefers hypodermic injections of nitro-glycerine as recommended by Kloman, to ammonia by the rectum.

A New Mercurial Salt for Injection.

This is the double hyposulphite of mercury and potassium. It presents itsef in the form of colorless crystals, easily soluble in water and producing no precipitate in solutions of albumen. The proportion of mercury which it contains is 31.4 to 100.

This salt has, according to Dr. Dreser, the remarkable property of being decomposed by electrolysis in such a manner that its mercury goes to the anode, for in the preparation the molecule of mercury does not exist in the metallic state, but in the form of a mercuric acid.

Injections of this compound are, according to Dreser and Camerer, no more painful than ordinary injections of morphine. They produce no irritation or local caustic effect, and the dose may be exactly regulated, 1 gramme (15 grains) of chloride of mercury corresponding to 2.32 grammes (nearly 36 grains) of the hyposulphite of mercury and potassium. The solution for injection is made in the proportion of 0.25 gramme (nearly 4 grains) in 10 grammes (2½ drachms) of distilled water. From ½ to 1 cubic centimetre of the solution is injected, corresponding to about $\frac{1}{12}$ to $\frac{1}{6}$ grain of corrosive sublimate.—*Med. Bulletin.*

Treatment of Typhoid Fever.

Dr. Osler, of Baltimore, in discussing the treatment of typoid fever at a recent meeting of the Clinical Society of Maryland, said that the antipyretic drugs were entirely superfluous in this disease. The cold bath is more efficacious, but is not always available in private practice; but all the good effects of the bath can be obtained by sponging. A good nurse or doctor can sponge the patient so effectually that the fever will be satisfactorily reduced. When temperature is high, ice sponging—not with ice water, but with lumps of ice—over the back and legs will reduce the temperature very pleasantly to the patient, and satisfactorily to the doctor. Delirium and stupor are also effectively treated by ice sponging. The use of modern antipyretics in typhoid fever is, in nine cases out of ten, positively hurtful. They reduce the heart's action, and cause weakening sweats, and their use is an unmitigated evil. In the great majority of cases the treatment may be taken from old Dr Nathan Smith, of Yale, which was pretty much that of to-day—plenty of fresh air, liquid diet, and cold externally. He was in the habit of turning out the friends of the patient, putting the patient on the floor, and then dashing water, handed through the window by an assistant, over the patient—*Canadian Practitioner.*

Cancer of Throat.

Dr. James M. French says, in the Ohio Medical Journal, that he has recently used with gratifying results, the following formula:

℞

Pyoktanin	.....	3j.
Chloroformi	.....	q. s. ut. solv.
Benzoinol	.....	3iv.

M. Sig.: Spray at intervals of one or two hours.

Neuralgia.

For stubborn neuralgia try the following:—

℞

Antipyrin	.....	3iss.
Caffeine	.....	3ss.
Ext. cannabis Ind	.....	
Ext. aconite	.....āā	gr. iiss.
Hyoscyami hydrobromat	.....	gr. ½.

M. et ft. caps. no. xxx.
Sig.: One every two or three hours.

—*Prescription.*

Addisonian Intoxication.

Dr. Chauffard has recently contributed an interesting paper to *La Semaine Medicale*, devoted to the consideration of the pathological condition which exists in Addison's disease. The writer notes the experiments of Abelous and Langlois in support of the view that the peculiar phenomena which occur in Addison's disease are due to the accumulation within the body of certain poisons which it is the duty of the supra-renal capsules to destroy. This is made clear by the following facts developed by the experiments referred to:

A frog deprived of its supra-renal capsule dies in forty-eight hours in the summer time, and in from twelve to thirteen days when in a state of hibernation, the length of the survival after the operation being directly proportioned to the activity of the animal.

When one capsule, or even a considerable fragment of a capsule, is left in place, the animal survives.

If after the destruction of both capsules a fragment of the kidney of another frog with the corresponding capsules attached in its normal condition, is inserted in the dorsal lymphatic sac, the life of the animal is prolonged to five or six days in the summer time.

The blood of a frog paralyzed and dying as the result of the removal of the capsules, is toxic to a frog recently operated upon, producing rapid paralysis and death.—*Modern Medicine.*

Codliver Oil.

Before the Therapeutical Society M. Patein read a very complete and interesting report on codliver-oil. It is the most digestible fatty food, probably on account of the biliary principles which it contains. Moreover, it possesses important stimulating and thermogenic properties, due to the phosphorus and iodine which it includes in organic combination, and also to the numerous alkaloids isolated by MM. Gautier and Mourgues. These alkaloids — butylamine, amylamine, oxylamine, dihydrobutyline, aselline, morrhuine, with morrhuic acid, etc.—exist principally in the light-colored oil, and result from an auto-digestion of the livers at the end of three or four days of maceration. It is an auto-digestion, and not a putrefaction, for at that period the livers have an acid reaction, whereas during putrefaction the reaction is alkaline. M. Patein touched rapidly upon the applications of codliver-oil: rachitis, pulmonary tuberculosis, rheumatism,—in which its action appears doubtful,—its external application in dermatoses, etc. He pointed out its incoveniences, its repugnant taste, purgative effect in large doses, accumulation of fat in the liver if its use is abused. He advises that the dose of 3 ounces should never be exceeded, that it should never be administered except in winter, that its exhibition should from time to time be suspended. M. Patein also recommends that the sides of the glass from which it is taken should be moistened in order to prevent the oil from adhering to the vessel. The patient should swallow it at one draught, and, after taking it, should wash the mouth with some aromatic water.—*Med. Bulletin.*

The Various Forms of Blood Cells.

The classification of the corpuscles of normal human blood has been much expanded by Ehrlich, whose groupings are followed by Dr. W. S. Thayer in the *Johns Hopkins Hospital Reports*. The red corpuscles, the blood plates, and the colorless cells make three easily demonstrated kinds of corpuscles in human blood, but the colorless cells need to be subdivided into five varieties, according to their differing reactions to staining fluids. Lymphocytes are the small colorless cells approaching the red corpuscles in size, the body of the lymphocytes being filled with a large, round, deeply staining nucleus, while the protoplasm is represented by a small ring about the nucleus. Uninuclear leucocytes are larger cells, which have a relatively large amount of protoplasm. Transitional forms are those cells which have a similar appearance to the two foregoing varieties, but differ from them only by the nucleus showing certain indentations which may give to it the appearance of an hour-glass. Multinuclear neutrophiles are cells perhaps a trifle smaller than the large uninuclear elements, and having a single nucleus so irregular in shape that it may appear as several nuclei under a single focus of the microscope, thus forming a characteristic polymorphic nucleus, with a thick non staining granulation. Eosinophiles usually have a polymorphous nucleus and contain the larger and more refractive eosin-staining granules. The protoplasm of the lymphocytes usually takes a red violet color with a triple staining, while that of the large uninuclear elements has but a slight affinity for coloring matters. There exist, however, in all human blood a number of uninuclear and some multinuclear elements, which have a protoplasm that remains entirely unstained, looking like a white spot or a small vacuole in the middle of the stained cell. Nucleated red blood cells, or normablasts, are found in the bone marrow. In pathological conditions there are many abnormal varieties of blood cells.

Arsenic in Recurrent Herpes.

Hutchinson is of the opinion that in this drug we have a means of controlling successive attacks of herpes. He gives a record of a case of "herpetiform pemphigus" in which formation of blebs was completely arrested by exhibition of arsenic. The disease returned when treatment was intermitted, but a continuance for two years produced a practical cure.—Dr. Johnston, in *Journal of Cutaneous and Genito-Urinary Diseases.*

Whooping Cough.

Fluid extract eucalyptus is a valuable remedy in whooping cough. When combined with extract glycyrrhiza it is not unpleasant to take.—*Kansas Medical Monthly.*

Hypnology.

At a meeting of the *French Hypnological Society*, several interesting cases were related, from among which we report the following:

Dr. Voisin states that C——, a young woman æt 19, has been at the Salpetriere since the age of seven, having been admitted as an epileptic. Every three months, and several times in succession, she was taken with very severe torticollis. During the night, the patient dreams, complains of her neck, and awakes with torticollis. See was considered by Dr. Voisin as being hysterical, and under the influence of hypnotic suggestion she was cured.

Dr. Regnault reported the case of a woman suffering from amenorrhœa and hysterical monoplegia, affecting the left leg. These conditions had persisted for a year when she was submitted to treatment by suggestion. The idea was suggested that massage would cure the anæsthetic trouble, but no mention was made to her of the amenorrhœa. Notwithstanding this, she was taken with rather severe flooding after the first seance, and after three applications of massage she was completely cured.

Dr. Ernould spoke of the value of suggestion in the different diagnosis of organic nervous lesions from the hysterical conditions which sometimes simulate them. He reported some cases in which this mode of diagnosis has proved of value.—*N. Y. Therap. Review.*

The Moment for Blood-Letting.

Sir Benjamin Ward Richardson considers blood-letting sound practice under several conditions of disease, notably the following: In acute spasmodic seizures, as in spasm of croup, in colic, and in angina with symptoms of oppression from distension of the right side of the heart with blood; in acute pain, membranous or spasmodic, as in sudden pleuritic or peritoneal pain, or in pain from passage of a renal or hepatic calculus; in acute congestion of vascular organs, as of the lungs or brain, apoplectics; in cases of sudden shock or strain, as after a fall or blow, sun-stroke, or lightning-shock; in exceptional cases of acute hæmorrhage unattended by pyrexia.

The blood may be drawn from a patient without fear of direct danger from the practice when the veins are full and the pulse firm, regular, full and tense; the pupil natural or contracted; the body at normal heat, or, with brain symptoms, raised in temperature; the bronchi free of fluid, and the sounds of the heart well pronounced.—*Asclepiad.*

Sciatica.

Dr. Metcalf orders:

℞ Tinct. aconit.....
Tinct. colch. sem.....
Tinct. bellad.....
Tinct. actæa racem .....āā equal parts.

M. Sig.: Six drops every six hours.

—Medical and Surgical Reporter.

Periodical Neuralgia.

Dr. William H. Thomson, of New York, has had good results in severe, long-standing, and rebellious cases from the use of ergot.

The fluid extract of the drug was employed, combined with an equal quantity of elixir of cinchona, to obviate its tendency to cause nausea. Two drachms of this mixture were to be taken in water as soon as the premonitory symptoms of headache were noticed, and the patient was advised to lie down and keep very quiet. If after an hour the headache continued, a second similar dose was taken, and then a third in another hour, if necessary. As nausea was such a general accompaniment of this affection, it was provided that if either of the doses be vomited it should then be taken in an enema of two ounces of water.—*American Practitioner and News.*

Antipyrine as a Sedative in Prostatic Hypertrophy.

Dr. J. Brik (*Med. Week.*) says the author considers antipyrine an excellent means of calming certain urinary disturbances observed in cases of hypertrophy of the prostate. Under the influence of this substance, it is claimed that the frequency of micturition during the night is notably diminished, while at the same time urine is passed more easily and with less pain. The antiyprine is administered to prostatic patients, especially during the acute exacerbation of the symptoms, in doses of 50 centigrammes to 2 grammes (7½ to 30 grn.) in 60 grammes (2 fl. oz.) of tepid water, in the form of enemata. In certain cases, Dr Brik advantageously injected into the bladder, after first thoroughly irrigating this organ, 20 to 30 grammes (5½-8 fl. dr.) of a 2 per cent. solution of antipyrine. In other cases he instilled into the prostatic portion of the urethra 10 to 12 drops of a 5-20 per cent solution of antipyrine, using for this purpose Güyon's syringe. These instillations at first determined a smarting sensation of short duration, soon replaced by analgesia which persisted for some time.—*A. M. S. Bull.*

Erysipelas.

During a long practice I have found the following local application most excellent:

℞ Aquæ puræ..... Oj.
Ferri sulphatis. q. s. facere solutionem ad saturandum.....

Sig.: Keep a cloth wet with the mixture to the parts affected.

℞ Iodoformi..... 5j
Olei rosæ..... gtt v.
Collodion..... 5x

M. Sig: Use as a local application four or five times daily.

The burning pain is relieved at once.

℞ Acidi carbolici (liquid).....
Spir. vini rectificati.....
Tincturæ iodini.....āā 5j
Olei terebinthinæ..... 5ij
Glycerini..... 5v

M. Sig.: Paint parts affected three or four times daily.

℞ Salol..... 9ij
Iodol..... 9j
Glycerini .....
Collodion.....āā 5j

M. Sig.: Apply to affected surface three or four times daily.

—Dr. N. B. Kennedy, in the *Texas Sanitarium.*

The Strychnine Treatment of Pulmonary Consumption.

Next to rest and food, strychnine in large doses, is the most important agent in the treatment of pulmonary consumption. Begin with $\frac{1}{32}$ of a grain, and gradually increase to $\frac{1}{16}$, $\frac{1}{12}$, or $\frac{1}{8}$ of a grain, or even larger doses, given four times a day According to the author it does not produce albuminuria or diabetes, as is generally supposed. It alleviates the loss of appetite, the vomiting, the constipation, the nervousness, and sleeplessness, the pain in the chest, the cough and expectoration, the dyspnœa, the weakness of the heart, and acts as a blood-builder in an eminent degree Its usefulness rests, of course, on its influence over the nervous system, and is another link in the chain of evidence which shows that in the great majority of cases pulmonary consumption is the direct result of primary disease of the pulmonary nerve supply.—Thomas J. Mays, M. D., in the *Coll. and Clin. Record.*

Concerning the Treatment of Abortion.

Eckstein (*Prager medicinische Wochenschrift*, Nos. 17 and 18, 1892) as assistant in Martin's clinic, has had opportunity to study sixty cases of abortion treated by Martin's principles in his private clinic in Berlin. He attaches the greatest importance in the curettage of the uterus to the thorough emptying of the tubal angles, as remains of placenta or portions of membranes are especially liable to be attached there. In nearly all the cases Eckstein followed a manual or instrumental emptying of the uterus with curettage, by the idea that an imperfect separation of the decidua and a consequent endometritis is thereby to be prevented. The results of this method were very satisfactory. From his experience he deducts the following:

1. The instrumental method of the treatment of abortion is the only rational one.
2. The recognition of the cause of bleeding from the uterus is of the greatest importance, and therefore in every uterine hæmorrhage a careful examination should be made.
3. Ergot and similar drugs should only be used when the uterus is empty.
4. If abortion is in progress, a tamponade of the vagina is only indicated when there is no dilatation of the os uteri.
5. When the dilatation of the os is sufficient, the emptying of the uterus, in spontaneous abortion, is indicated.
6. In large embryos, from the fifth month on, one conducts the abortion as in labor at term.
7. In abortion attended with fever and the decomposition of the product, the uterus should be emptied of its contents as quickly as possible.
8. A thorough curettage of the endometrium should follow every emptying of the uterus in abortion.—*Western Med. Reporter.*

Proper Time to Give Acids, Alkalies, Etc.

Alkalies should be given before food. Iodine and iodides should be given on an empty stomach, when they rapidly diffuse into the blood. If given during digestion the acids and starch alter and weaken the action. Acids, as a rule, should be given between the digestive acts, because the mucous membrane of the stomach is in a favorable condition for the diffusion of the acid into the blood. Acids may be given before food when prescribed to check the excessive formation of the acids of the gastric juice. By giving it before meals, you check the osmosis stomach-ward of the acid-forming materials. Irritating and dangerous drugs should be given directly after food, such as the salts of arsenic, copper, zinc and iron, except where local conditions require their administration in small doses before food. Oxide and nitrate of silver should be given after process of digestion has ended; if given during food, chemical reactions destroy or impair their special attributes, and defeat the object for which they were prescribed. Metallic salts, especially corrosive sublimate, also tannin and pure alcohol, impair the digestive power of the active principle of the gastric juice, so should appear in the stomach during its period of inactivity. Malt extracts, cod liver oil, phosphates, etc., should be given with or directly after food, so that they enter the blood with the products of digestion.—*Ex.*

SURGERY.

Causes of Sexual Debility.

Dr. F. R. Sturgis gives the following summary of his views at the termination of a very instructive paper:

1. That the cases of sexual debility which are marked by imperfect erections and by premature emissions, are usually, if not entirely, due to hyperæsthesia of some portion of the urethra.
2. That masturbation has very little, if anything, to do with it, beyond the fact that if indulged in to excess, it may induce a tendency toward this hyperæsthetic condition, but this is no more marked in masturbators than it is in those persons who indulge to excess in the venereal act.
3. That organic stricture has little, if anything to do with it; but that associated with this hyperæsthetic condition there is an irritable condition of the canal which produces spasmodic contractions of the urethra upon attempts to pass instruments, oftentimes during the first act of micturition and at the time of connection.
4. That varicocele plays no unimportant part in these cases.
5. That neuralgia of the testis, if a cause of this disease, induces it merely as a secondary consequence to the pain which is one of the distinguishing features of this disease.
6. That tuberculosis, syphilis and gonorrhœa may also play their part and should all be reckoned with in summing up the causes which may induce this peculiar and depressing condition of affairs.—*Gaillard's Med. Journ.*

Impermeable Stricture of the Urethra; Dilatation by Hydrostatic Pressure.

Marx (*Semaine Medicale*) says the following method of procedure has been recommended in cases of "impermeable" stricture of the urethra:

The urethra is distended, by means of a syringe, with a mixture of equal parts of a four per cent. solution of cocaine and of 1:1000 corrosive sublimate, and while the fluid is prevented from escaping, a catheter or bougie is introduced which passes through the stricture with great ease. This is ascribed to a funnel shaped dilatation of the stricture caused by the pressure of the fluid, but we are inclined to believe that the cocaine, by reducing the congestion of the urethral mucous membrane may be an important element in this treatment.—*N. Y. Therapeutic Review.*

GYNECOLOGY.

Senile Endometritis.

At the Annual Meeting of the Medical Society of New York, February 6-8, 1894, a paper upon this subject was presented by Dr, A. J. C. Skene, of Brooklyn, of which the *American Journal of Obstetrics* contains the following abstract:

There was a general opinion that endometritis ended in recovery at the menopause, but Dr. Skene had seen it continue after this period, and a good many cases in which it had arisen subsequently. He had concluded, eighteen years ago, that senile endometritis was a distinct affection which deserved more attention; it was quite different from the endometritis of earlier life.

In pathology senile endometritis might be limited to the cervix, but as a rule it involved the entire mucosa. It was usually suppurative, the discharge being sero purulent, and when it began as a catarrh it usually progressed to the suppurative form. The epithelium of the endometrium became almost entirely lost; granulations of low vitality sprang up; minute extravasations of blood were seen, with small pigment spots; atrophy of the muscular tissue was present, which caused inversion of the mucous membrane; laceration of the cervix was a frequent accompaniment; there was often partial or complete stricture of the os internum or externum; pus would be discharged and again accumulate. When the disease had existed long enough to destroy the mucous membrane, it might end in cicatrization, but it could hardly be called self limiting.

As to causation, continuation of endometritis acquired before the menopause accounted for some cases. Some of the severe ones, involving the body of the uterus, were caused by displacement, especially retroversion, which interfered with the escape of the secretions. Stricture of the os internum acted in the same way. In the majority of cases the occlusion was the result of inflammation. Acute or latent gonorrhœa might cause it, but he was not sure that he had ever seen acute gonorrhœal inflammation after the menopause. Inattention to cleanliness might cause it, also fibroma.

The first symptom to attract the attention was the discharge, and this varied according to the extent and stage of the inflammation. When there was interference with drainage there were more pain and constitutional disturbance. There might be slight chronic sepsis; digestion was interfered with; there was apt to be a dry, bronzed skin, suggestive of malignant disease. In case of true stenosis the pain was acute and compelled the patient to rest in bed. The discharge differed from that of leucorrhœa in being less tenacious; its color, indicated, too, that it was sero-purulent. The differentiation from specific disease and malignant disease called for the use of the microscope. In adenoma there was menorrhagia, which did not occur in senile endometritis.

BACTERIOLOGY.

Flies and Cholera.

Dr. J. G. Sawtchensko recently conducted a series of minute experiments, the result of which has been to demonstrate that the comma bacillus to which cholera is due, may be propagated and disseminated by means of flies, since the microbe when swallowed by a fly not only resists the action of the digestive fluids of the insect, but multiplies in its intestinal canal. This same fact has been observed as regards the vibrion of Metchnikoff, and in relation to both the ordinary small fly and the larger species. Grassi showed, long ago, that the eggs of certain parasites, particularly tapeworms and oxyuris, may pass through the intestinal canal of a fly, and may thus be brought in contact with the food. Dr. Joseph, of France, has observed the microbes which give rise to cholera nostras in the blue fly and in the golden fly (Lucilia Cæsar.)

The immense importance of these facts is apparent when we consider the fact that a single microbe, when falling in a suitable medium, may give rise to an infinite number. These facts are sufficient to explain the observation frequently made in outbreaks of cholera, that the disease makes its appearance at many independent foci, and not infrequently it is utterly impossible to trace any direct connection between the early cases. This was notably the case in the last outbreak in New York City.—*Modern Medicine.*

An Improvised Method of Securing the Trendelenburg Posture.

Dr. Geo. W. Cale, St. Louis, in *The Hot Springs Medical Journal* shows how this position may be secured for operation in the country or in the most modest home by placing an inverted chair upon an ordinary kitchen table, and after placing a pillow on the back of the chair covering the whole with a sheet.—*Southern California Practitioner.*

ARMY AND NAVY.

CHANGES IN THE U. S. ARMY FROM JULY 29, 1894, TO AUGUST 4, 1894.

Leave of absence for one month, to take effect about August 6, with permission to apply for an extension of one month, is granted First Lieutenant R. S. Woodson, Assistant Surgeon.

Leave of absence for one month, to take effect about October 1, 1894, with permission to apply for an extension of one month is granted First Lieutenant F. A. Winter, Assistant Surgeon.

First Lieutenant A. N. Stark, Assistant Surgeon, now at Fort Sam Houston, will proceed to Camp Eagle Pass, Texas, and report for temporary duty.

Leave of obsence for one month, and twenty days, to take effect on or about August 15, 1894, with permission to leave the United States, is granted Lieutenant Colonel Alfred A. Woodhull, Deputy Surgeon general.

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ORIGINAL ARTICLES.

A PLEA FOR THERAPEUTICS.

WM. B. WARNER, M. D., Red Bank. N. J.

This is an age of investigation. An age which might almost be called ultra-scientific. An idea or a proposition which is born to-day, must come into existence prepared to fight for its survival. It will not be taken on faith. It will not be accepted as a truth because its progenitor calls it such; but it must come stripped of all debatable factors in order to meet the stony glare of to-day's scientific judgment.

It must expect to be weighed and measured. It must be put to the test of theodolite and chain, crucible and retort, microscope and spectroscope. In fact it must while still upon the threshold of science, stand with such form and color, that of it, it may be said "This is a condition and not a theory which confronts us." This principle of delving after truth, of separating the chaff from the wheat, is not confined to *new* ideas, but is also brought to bear upon theories and corolaries which are moss-grown and hoary with age. Among the rattling of dried bones, the probing of dogmas, the shaking of faiths, and the sifting and culling which is the tendency of the hour, how can therapeutics, which as a science is manifestly far from being exact, hope to escape?

And it goes without the saying that it has not escaped. In the general onslaught which has been made along the line of battle against tradition and theory, therapeutics has certainly borne its share of the brunt of the conflict.

Of all the branches of medical science, therapeutics is to the general practitioner of paramount importance. It is his buckler and shie'd; his lance and sword. It is his means of combating disease; his key to public confidence; the bridge which is to carry him to success or failure. This being his position in relation to the subject in question, it behooves him when this his chief citadel is attacked, to examine his intrenchments in order that should any defects be found, they may be remedied and his position strengthened.

No one will undertake to argue that this branch of the science of medicine is as exact as mathematics for example.

We cannot say that given a malady, and given a remedy, the one can be applied to the other with the same certainty of result that sulphuric acid applied to zinc will yield hydrogen gas.

To say, however, that therapeutics with all the principles which it teaches is a delusion, is virtually another way of saying that the physician is an imposter. We can not believe the one without admitting the other. The medical man, therefore, who stands upon the ground of extreme skepticism as to the question of the

*Read before the Monmouth Co., N. J., Medical Society, May 21, 1894.

treatment of disease, simply has no excuse for his existence; he puts himself upon trial for his life.

In contradistinction to the true science of our profession Trousseau has aptly called therapeutics the art of medicine; for as the mechanic's knowledge of the use of his tools is his means of carrying out his plans so is his knowledge of this art, the physician's means to a similar end. He may use the stethescope, the sphygmograph, the speculum, the urinometer, or any of the various instruments employed for precission in diagnosis, with the greatest possible skill, or he may with scalpel and microscope solve the post mortem problems which are placed before him; but his true function is to battle with and conquer disease, to face emergencies, and relieve physical distress; and this he must do, through his knowledge of the practical rather than the theoretical side of medical science.

If it could be demonstrated that the laws of health and disease were as certain in their action as the laws which govern the moments of the celestial bodies, or the laws of chemical reaction or as any other fixed physical laws, the art of therapeutics would soon become a science exact enough to please the most exacting. But unfortunately for various reasons this can not be accomplished; and the failure of therapeutics to maintain itself on the principle of quad erat demonstrandum has been unavoidably the means of dividing the profession into two great classes.

First:—The physician *par excellence*: the man who recognizing the importance of the fact that a medical man should be well informed in a general way, that he should appreciate the importance of a knowledge of the science of medicine, also knows it to be equally desirable that he should be a consciencious and skillful practitioner; and he knows that it is quite within the possibilities to be the one without being the other. His armamentarum is not extensive. He employs only those measures which he has found to be worthy of his confidence, and if he adopts a new agent of therapy, it must come to his notice very well recommended. He is conservative in the sense that conservatism does not interfere with progress. As his experience increases, so increases his usefulness. Each day in his busy life has marked an epoch in his accumulation of practical knowledge. Each day has made his weapons of offense and defense sharper and more available in that warfare in which he is so constantly employed.

Second:—The skeptic: This class is represented by the man who has a lofty idea that he only has talked face to face with Truth, has held her by the hand and enjoyed her utmost confidence. He takes the ground of extreme incredulity. He repudiates the entire system. He practices medicine because there is nothing else for him to do, trusts to the recuperative powers of Nature and sits quietly down and waits. If, however, his goddess smiles upon him, as she has occasionally been known to do, he coolly pockets his fee just as if he had something to do with the result himself.

Another class might be added, viz:—The empiric. The man who does not know the why or the wherefore, and does not care to learn. He generally employs the quassi proprietary concoctions that are sown broadcast over the land, and reads with avidity the accompanying pamphlets which describe in glowing terms the wonderful results obtained from this or that uterine alterative or nervine. Thus it may readily be seen that in our search for the factors which are causes for the elusiveness of the principles of therapeutics, the first fact confronts us is that as the perfection of a piece of mechanical work will vary with the man who uses the saw and plane, the square and plumb, so also will the results of the practice of our art, sometimes vary with the person who directs the remedies and agents in their application to disease. Another of the causes which may lead to disappointment in therapeutics is the failure of the medical man to recognize the difference in the susceptibility to drugs which obtains in different individuals. A resume of some well known facts in this connection, perhaps, would not be out of place. For example, I know a man who is influenced by one-sixteenth of a grain of morphia sulphate as much as the average human being is by one-quarter of a grain; and until this was discovered it was supposed he could not take the drug with safety. Another patient, a woman, who came under my notice after the administration of one-half a grain of morphia hypodermically, became comatose, pupils contracted and respirations ran down to four per minute; her condition was cer-

tainly one of extreme gravity, and was the cause of much anxiety on the part of her medical attendant. I am glad to say however that the patient recovered. Every physician knows that no definite law can be formulated as to the amount of quinine which will be necessary to break the paroxysms of intermittent fever, and yet we all know that if this drug is exhibited judiciously the result can be counted upon with almost mathematical certainty. So also in the use of bichloride of mercury and potassium iodide for the treatment of syphilis; who can say in a given case to what extent these agents will have to be carried and yet we know them to be worthy of our confidence. Chloral Hydrate, the bromides, sulfonal, and many other hypnotics are notably varying in their effects upon different individuals, yet these drugs seldom disappoint us when the proper dose is found. Strychnia is a remedy which has proved itself simply invaluable in various abnormal conditions of the heart, notably in valvular disease with a feeble systole and general lowering of blood pressure. In a rather extended experience with this drug in this class of cases, I have found the most varying susceptibility, necessitating the employment of doses of different sizes in order to obtain the result desired.

As in different individuals we find different degrees of sensitiveness to the effects of drugs, so also do we find that to produce certain results entirely different remedies will be required in different cases. Because tr. chloride of iron was beneficial in the case of A, who was anæmic, is no reason why it should be the most advantagious remedy for B.; perhaps iron by hydrogen or the sulphate, or the Pyrophosphate, or some other form of iron would act much more satisfactorily in the latter case.

Digitalis, the usefulness of which as a remedy cannot be questioned, can sometimes with profit be superceeded by convalaria; this fact is most pronounced in those cases in which digitalis is not well borne by an irritable stomach; convalaria is frequently much better tolerated. Nitro-glycerin and strophanthus which can be employed with advantage in many cases are plainly far from being satisfactory in others. The value of resorcin in the treatment of various gastric disorders, notably in chronic gastritis was first pointed out by Dr. Mackay in a paper read before the British Medical Association, in August 1886, and later by Dr. Wm. H. Thompson, in a paper read at the annual meeting of the New York County Medical Society, in November, 1892. This drug is certainly a most valuable agent, but an occasional case will be found where by its employment no appreciable effect can be produced. Dr. Thompson himself claims out of seventy-eight cases, fifty-one successes, twenty-one failures and six doubtful.

Out of fifteen cases treated by myself with this drug, which cases included gastric catarrh and acute and chronic catarrhal derangements of the small intestines, I can justly claim two-thirds of bona fide cures.

Necessarily a certain amount of experimentation will occasionally have to be indulged in, that the best means to an end may be found. The physician, however, should be quick to read the signs as to whether he is doing his best for his patient, and judiciously change his remedies when he thinks it can be done with advantage.

One point which will bear mentioning is the too general practice of prescribing drugs with no clear idea as to what is expected of them. Perhaps the hurry of a busy professional life, or the fear that the patient will demand that something be done for him, or the wish to gain time to study the case, or habitual carelessness, or even gross ignorance on the part of the medical man, will be the cause of a habit of loose prescribing; that is to say, with no conception as to the meaning of the symptoms presented, or at the most with only a hazy idea of a diagnosis, remedial measure will be recommended, and a line of treatment instituted with not the faintest conception as to what is to be accomplished, but only a fond hope that by a hit or miss process, a satisfactory result will somehow be obtained. Hence if the physician can not lucidly explain to himself *why* a remedy is given, it had much better not be given at all; or if he must prescribe on these lines, let him for the credit of his art, embrace the theory of high potency, so that his remedies may at least do no harm. Again the personality of the patient may sometimes be the cause of failure in therapeusis. This may be owing to impatience, to vacillation, or to a want of frankness, or

to stupidity in stating the case for consideration. A patient who is markedly neurasthenic will sometimes by a combination of these characteristics, make the life of his medical man a burden to him. There seems to be an undefinable antagonism between a physician and an occasional patient which influences to a marked degree the desired result. Perhaps this statement verges on the visionary, but such a condition I am sure not infrequently occurs.

One of the most important causes for the comparatively slow advancement of therapeutics lies in the fact that other branches of medicine promise more eclat to their disciples. The specialties demand larger fees and insure more public prominence. Surgery in all its special departments is notably alluring to the ambitious medical man. There is something which approaches the heroic in handling glittering knives and causing blood to flow. The every day experiences, the routine work of the general practitioner is a part of a life of usefulness, but it lacks the luster and stir, the applause and rewards of the other departments, and therefore while the science of medicine has enjoyed the advantage of having its achievements constantly recorded and heralded to an expectant world, the more unostentatious triumphs in the realm of true therapeutics have often represented the unrecorded private knowledge of individuals, the personal experience of quiet practitioners which passed into oblivion when the possessor ceased to exist.

Thus I have tried to demonstrate briefly, that while victory does not always perch upon our banner, it is not necessarily because therapeutics is a delusion and a snare, but because the art is continually hampered by conditions which tend to prevent its substantial advancement.

If I have underestimated the *science* of medicine, its institutes, its theories, it has been unintentional; for to not fully appreciate that which has rescued the profession from the darkness of superstition, would be virtually a confession of stupidity. Fothergill has said, "That some should declaim against theory, is no more than that an eunuch should inveigh against lechery; it is the chastity of impotence." The science of medicine is the foundation upon which the art must rest; and the foundation must be improved and strengthened in order to securely support the superstructure.

But let us not neglect the part of the building which is above the ground; the part which must be as a refuge to those who expect us to aid them. They do not see the solid masses of masonry, the iron girders, the braces and general perfection of the subterranean portion, but they judge of the entire building by the part which meets their view.

They do not estimate their medical man by any such standard as his knowledge of the pathology and remote consequences of regurgitation at the inetral orifice, but if by a possession of this knowledge, he is the better enabled to bring to them relief, then is he exhibiting attributes which they can fully comprehend and appreciate.

That the art has fallen behind the science in the struggle towards perfection, is manifest to any careful observer; and with the general practitioner, more than with the specialist, rests the future of therapeutics. With the country practitioner, perhaps, most of all, the man who has been scornfully called the cross-roads doctor, lies the power of retaining the art in a position of public confidence and trust. Because he must be a man of expedients; he must face emergencies of every grade, often single handed, and entirely cut off from professional council and assistance. He learns to choose his therapeutic measures with judgment, for he must have only those in his armamentarum which can be used with precision and profit.

He can also afford to be honest with his patients. Not being surrounded by the bustle and professional rivalry of the large cities he can advise them carefully and candidly as what is to their best interest, and not as is the fashion of the hour, place them on his medical Pegasus and fly with them through mystical labyrinths of gynecology, neurology and several other learned ologies, representing the entire internal and external structure of the human organism.

And as to Nazareth was once given the key to an important crisis in human affairs, so also may truth which occasionally lurks in strange places, some time in the golden future be found to have existed during all these years even in places remote from the hallowed precincts of the great medical centers.

PATHOLOGY OF CANCER.*

H. E. MUNN, M. D.,† Toledo, Ohio.

The essential histological elements of cancer consist of various forms of cells of epithelial character. These cells constitute larger or smaller spherical or elongated masses in the alveolar or interstitial spaces of the part in which they grow. Accompanying the growth of these cells and the continuous penetration of them into such spaces, is an increase, more or less proportionate, of the fibrous tissue stroma.

In many cases the new tissue is evidently an inflammatory hyperplasia produced by the irritating invasion of the epithelium. In other cases or forms, the stroma and vessels therein appear to be of new embryonic formation, and while not of due proportion, as in surrounding tissues, yet not bearing evidence of inflammatory origin.

Medullary encephaloid and the glandular varieties belonging to this latter group, and scirrhous and epithelioma to the former. The cells filling the alveoli, to a greater or less degree, resemble normal epithelial forms found on such surfaces, or in such masses where the growth originated. Conditions of rapid growth, of age, of degenerative changes and of pressure, determines the shape, size and other attributes of the cells.

If the theory, or rather hypothesis of Cohnheim, that tumors arise from the inclusion of embryonic cells or collections of cells, which after complete evolution of the tissues are by some stimulus excited to growth and development, unrestrained and undirected by co-ordinate or co-operative growth and development of the whole, —if this be true, and it seems not improbable, then the embryonic cells or bits of tissue from which the carcinomata arise, must have undergone evolution up to the stage of differentiation of the germinal layers. In fact, this must be true also of all tumor pathogenesis except perhaps for the so-called "dermoid cysts."

For leaving out these last, we find no abstractly heterologous tumors; but, those of mesoblastic character taking rise from tissue of mesoblastic origin, and the epithelial form hypo and epiblastic sites only.

What a matter of interest, perhaps of conjecture only, to look down along the path of tissue evolution, and see where nature's emigration train has, unnoticed, dropped the undeveloped, imperfect seed here and there along the way, to lie unseen, perchance to spring into luxuriant and noxious growth long afterwards.

Away down in the scale of development, probably from among the mass of cells having common and undifferentiated potencies, before the germinal layers had begun to form, was left aside from the current of evolution's tide, a cell or two, from these we get all sorts of tissues, epithelial and mesoblastic, in the "dermoid cyst."

Further up where the ways divide, we have the separation into three classes of cells, and across the line our growth cannot pass, but just this side of the line we have those abandoned orphans of nature who have all the possibilities of the mesoblast in its infancy. Here the sarcomata spring up; and so on, coming down to those which must have been passed by just before the final completion of tissue, to give rise to tumors much like normal forms. Curiously enough, we get no true nervous tissue tumor growth except in "dermoids" and the sustentacular tissue neuroglair gliomata.

So, these cancerous tumors also show their ancestral traits, for not only do they arise from epithelial structures solely, but they exhibit in morphology a similarity, more or less distinctly expressed, to the epithelium of the organ or surface in which their parent cell was included. Thus, the epitheliomata of epidermic origin have more or less aquamous cells, as also the more massive and even semi-columnar ones, which show degenerative changes similar to stratum corneum, lucidum and the malpighian layer. Cells like those in concentric nests and "pearls," staining like similar cells in stratum lucidum and corneum.

Those of internal passages of hypoblastic derivation have cells of columnar form with other distorted shapes. So also those of glandular site, present forms similar to

*Read before the Northwestern Ohio Medical Association at Van Wert, Ohio, June 29th, 1894.

†Professor of Histology and Pathology in Toledo Medical College.

those of the mature gland, or to those of general embryonic gland forms.

The development of normal cells, from the óösperm through all its progeny up to the fully matured individual living organism show a purposive tendency, a disposition even through many metamorphoses to arrive at definite and orderly complexity and differentiation. And, if abortive and monstrous forms occur, they are from interrupted and incomplete development, or some diversion of evolution into long obsolete but primeval paths. That is to say, however diverse the outcome of development may be, from that which now constitutes the complete and perfected structures or organism, the resultant parts or whole, show the attempt of the injured, hindered or exuberant cell to develop along the lines, and to the ends shaped by ancestral environment.

Therefore, we are justified in believing that these pathological forms are attempts of the aroused embryonic cell (hitherto latent), to produce something which it might have completed, had it gone on in tissue construction aided and restrained by its fellows.

Of epithelial tumor construction we have at the extreme two classes, one which is nearer maturity in embryonic ancestry, and, therefore, the main line—the benign adenomata, which frequently in its more perfect forms, rather closely resembles normal glands in structure and function—that is, producing something resembling some of the glandular secretions.

These may be set down as the epithelial analogues of the more mature varieties of mesoblastic tumor formation—the benign fibro-lipo-, chondro-, osteo-, myomata, etc. At the other extreme are the carcinomata; these are for the most part made up, as previously stated, of masses of epithelioid cells, penetrating into the subjacent tissues.

These may be classed as of the "cadet," line, which left the train of evolution farther back, and not having received the directing and restraining impress of orderly development and association as late as the other class, produce more aberrant forms. These are analogous to the malignant mesoblastic tumors—those embryonic and immature-featured sarcomata.

In the sarcomata we recognize the mesoblastic tissue tendencies, as much as in those of maturer and more stable development. So it seems to me we may recognize in the carcinomata the tendency of gland production, even though lacking most essentials of the adult organs.

Epiblastic glands are developed by the ingrowth of solid cylinders of epithelial cells, which branch and ramify, or remain more simple, with formation of lumen in ducts and acini by separation or degenerative solution and mingling in first secretion, further there is formed the specialized limiting basement membrane, continuous with that which lies beneath the malpighian layer, and upon the vascular corium.

In hypoblastic gland evolution, in some cases the same process obtains, but many of the glands are produced by tubular involutions of the mesenteron with subsequent specialization of cells into gland epithelium.

These invaginations may remain as simple tubular glands or become complex. The adenomata originate in the same manner, and some of them having lumina with cystic exaggeration, while others persist as solid cylinders of epithelium.

As before said, the more perfect the approximation to normal type, the more benign their characteristics. But these epithelial new growths are not all benign, many of them having a distinctly glandular appearance, being quite malignant.

Now, these go over toward the border line of carcinomata, and not only is there a shading off of the adenomata and carcinomata toward each other in qualities, but also in optical appearances.

And this insensible graduation goes on clear through the epithelial tumor growths, from one extreme to the other. At the extreme of carcinomata, we have an attempt at the production of gland tissue, but it reaches only the earlier embryonic stage in that line of evolution, that is, the ingrowth of epithelial or epitheloid cells in alveolar or cylindrical masses, without orderly arrangement, the formation of lumen or membrana propria.

While the most embryonic of sarcomas, those consisting of granulation cell elements, are recognized as abortive attempts at connective tissue construction, these epithelial ingrowths have been classed as "anomalous" instead of being denominated as of the type of "embryonic adenomatous tissue" tumors. For such they properly should be.

The general arrangement of cancerous growths and the cell peculiarities have, without a doubt, something of ontogenous impress; that is, are influenced in this way by the characteristics of contiguous structures. We see this quite markedly in the sarcomata, which take on pigmentary, or reticular, or alveolar form, if growing near or into structures having these qualities. Nevertheless, the phylogenous influence, or that of ancestral cell acquirement is the major one, for these growths never pass over the line which has differentiated the mesoblastic from the epithelial, thus exemplifying the laws of the "instability of the homogeneous" and "of increasing heterogenity" long ago recognized by Von Baer and Herbert Spencer. For though we find many examples of tumors taking on appearances in greater or less mimicry of contiguous tissues, we have every year more convincing evidence that the invasion of tumors by peripheral extension or embolic implantation in tissues of a specifically different class, has no effect to render its histogenesis other than that produced by that of ancestral or phylogenous impress.

The primary site of cancer, remote from some glandular structure, is in the nature of things almost an impossibility, except perhaps, those arising from the so-called endothelial surfaces of the serous body-cavities. So that the phylogenous influences in cancer are not so readily distinguishable from those strictly ontogenous.

In tumors of mesoblastic type it is, in very many cases, much more readily observed, for while many are decidedly homeotopic and heterotopic forms are perhaps quite as frequent.

The lymph-adenomatous structure, and the pigmented varieties of sarcomata, when originating in or near normal tissues having such features, are undoubted examples of local influence. Growths of fat, fibrous tissue, muscle, etc., in like normal tissue sites, are probably examples of late developmental interruption of the cells of origin.

Hererotopic growths as of bone, cartilage, fat and muscle, whether benign (and therefore of more mature type), or malignant, (and therefore more embryonic) necessarily must be interpreted as exhibiting some directing influence other than that of contiguous normal tissues.

Microscopical investigations in histology, embryology, and pathology, have demonstrated that in pathogenesis, as in normal histogenesis, there is, we may say, a determinate effort toward orderly and definite development. But the immediate cell ancestors of cancer growth, as of other neoplasms, lack the restraining and co-ordinating impress of the later stages of tissue evolution. The necessary exuberance, of growth and deficient stability, as well as the time of appearance, verifying for this much at least, the aphorism of Virchow, that "disease processes consist in excess, or deficiency, or being at the wrong time, or the wrong place."

The Value of Boiled Milk as an Article of Diet.

Every practitioner of medicine knows that in the treatment of certain cases of diarrhœa, where an absolute milk diet is required better results follow the use of boiled milk than of raw milk, and for this reason it has become a popular idea among the laity and members of the profession that cooked milk is the more digestible. However this may be in clinical experience, it is certain that experimental research dose not justify this conclusion. Ten years ago the late Dr. Randolph, of Philadelphia, made an interesting series of experiments to determine this point. A number of men in perfect heath were given raw milk to drink; an equal number, equally healthy, were given a similar quantity of boiled milk. An equal time after the ingestion of the liquid a hypodemic injection of apomorphine was administered to each, and a careful examination made of the vomited matters to determine how far the process of digestion had proceeded. In every instance it was found that the raw milk was more digested than the cooked, and as Randolph grahpically expressed it, "We obtained proof that in making milk, nature made that compound most easy of digestion."

The experiments of Crolas on the other hand, seem to point to a different result, for he believes as a result of his studies that boiling has no action whatever on the casein or lactose, and removes from the liquid a small quantity of butter, which is entangled with the film of albumin which forms on the surface of the milk. He also thinks that boiling increases the quantity of the free soluble phosphates, and concludes, in opposition to the studies of Randolph, that boiled milk is equivalent, if not superior, to raw milk.

CHRONIC OTORRHŒA—ITS SIGNIFICANCE AND TREATMENT.

DUNBAR ROY, A. B., M. D., ATLANTA, GA. *

Some one has said that the eye is "the window of the soul." and I feel justified in extending the metaphor by saying that the organ of hearing is the portal to our most sentient nature, It is true that the eye makes us cognizant of the beauties of nature—its mountains, its vales—its rivulets and oceans—its Autumn leaves with their myriads of tints, but it is equally true that the organ of hearing puts us into communication with the outer world by a sense even so subtle as that of sight; it causes a weird trance of immagination, filling the soul often with the sublimest ecstasy, causing us to burst forth in admiration for the words of the imortal Poet who said,

> "The man who hath no music in his soul
> Nor is not moved by concord of sweet sound
> Is fit for treason, strategem and spoils."

How necessary is it then, not only from a sentimental view as the above but also from one more practical, that we should endeavor by proper hygienic measures and, as far as possible, by the proper treatment, to preserve the integrity of the organ of hearing.

My object in presenting this paper is not for the purpose of going into the intricate pathology of this morbid process nor to bring forward any new and startling facts in its treatment, but in a practical manner to refresh the minds of those whose privilege it has not been to keep pace with the rapid advances of otology, and, at the same time, to incorporate some ideas gained from personal clinical experiences.

Otorrhœa etymologically means a discharge from the ear, but by common acceptation of the term it is usually understood as referring to a chronic running from the external auditory meatus dependent upon a morbid state of the tympanic cavity. Every discharge from the ear has its source and its distinctive cause which must be thoroughly ascertained before one can ever hope to treat successfully this class of troubles, for he who uses ear douches at random, or swabs out the ear in the same manner will often come to grief, and such can never hope to rise to that prominence in his chosen profession which comes by exactness and knowledge of the subject, coupled with a large amount of common sense. In teaching at the Southern Medical College my habit has been to divide all chronic discharges from the ear as having their origin either in the external or middle ear.

CHRONIC DISCHARGES FROM THE EXTERNAL AUDITORY MEATUS.

(*a*) Discharges which usually occur in some portion of the human economy arise almost without exception from cavities lined by mucous membranes, and hence it looks quite anomalous that a discharge should arise from the external auditory canal which is nothing but a dermoid surface. That such is the case no one can doubt who has ever had much clinical work in ear diseases. Sir Joseph Toynbee, in his work on Diseases of the Ear, published in 1860, enumerates many cases of pathological conditions of the external canal where one of its most common symptoms is a discharge from these parts. Sebaceous, sweat and ceruminous glands are abundantly scattered in the dermoid layer of the canal and there only needs an irritative factor in any form to produce a hyperæmia and congestion of the parts to be followed by a milky discharge. One of the most frequent causes of this symptom is is a moist eczema of the canal and closely allied to the same, as far as treatment is concerned, is the pathological condition known as otymycosis, depending upon the presence of certain parasites for the production of this morbid state. The symptoms of the two conditions are much the same. On looking into the external auditory canal one will observe a wet, soggy condition of the parts, flakes of moistoned epithelium like blotting paper clinging to the walls and in addition, a turbid discharge exuding from the canal. Such a condition is not infrequently met with, hence it behooves the physician to be ever on the alert for the true diagnosis, since by the proper applications the parts can soon be restored to their normal condition.

The treatment consists in syringing the canal at the first sitting with a warm solution of biborate of soda, cleaning the canal with a small curette, drying thoroughly the parts with cotton and then ap-

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plying your medicament. This latter is best done by ointments or powders. One of the best is a dram from each of Boric and Salicylic acid to half an ounce of vaseline. This should be applied once a day, to be followed by insufflations of Boric acid powder. With the subsidence of the symptoms the number of applications can be gradually decreased.

(*b*) *Polypi and Foreign Bodies.*

By the presence of such bodies as these the whole canal through irritation, becomes congested and with this hyperæmic condition there is an increase of the glandular secretion in this part. The discharge is sometimes very copious but differs from that which comes from the tympanic cavity in being more watery and whitish in appearance.

The only treatment in such cases as these is the removal of all foreign and offending substances. Polypi are best removed with the cold wire snare and their base afterwards treated with chronic acid applications. If the growth is too small for the snare, then a small ring curette can be used.

DISCHARGES ORIGINATING FROM AND DEPENDENT UPON PATHOLOGICAL CONDITIONS OF THE MIDDLE EAR OR ITS CONTIGUOUS CAVITIES.

Let us refresh ourselves for a moment with the anatomy of the parts. The tympanic cavity is situated within the hardest bone of the body, communicating with the throat through the eustachion tube, with the antrum mastoideus through the aditus antrum, while its outer wall is limited by the membrana tympani. It is lined throughout by mucus membrane, being continuous with that of the communicating cavities, and is traversed by a chain of three small ossicles. Two of these ossicles, the malleus and incus, are in close contact with the inner surface of the drum membrane, while the greater portion of their heads and bodies are situated high up in the atic of the tympanum. It is these two ossicles which have taken such a prominent part for the last few years in producing chronic discharges which had remained incurable until the necrosed ossicles had been entirely removed. Every case of chronic middle ear discharge can trace its origin to an acute otitis media, but why some of these acute cases recover without any untoward result while others leave their mark in the shape of a chronic discharge, are questions which have not been satisfactorily answered. Certain it is that the condition of the general system, the question of blood and lymphatic dyscrasiæ play an important *rôle*. We must also bear in mind the fact that a chronic discharge from the tympanic cavity can be either *simple* or *purulent* in character, and in this way greatly influencing us in our prognosis.

For convenience sake, I have classified chronic discharges from the middle ear as occurring in (1) Childhood, (2) Adults.

CAUSES.

(*a*) Children in whom there is a scrofulous or syphilitic taint are the ones most liable to chronic discharges from the ear, discharges from the nose, and to certain forms of ocular troubles, such as phlyctenular and interstitial keratitis. It is just in these cases that the systematic constitutional treatment produces its most beneficial results.

(*b*) The acute infections and contagious diseases, especially scarlet fever and measles, are frequently followed by a chronic otorrhœa as one of their sequelæ. In fact, statistics show that the majority of patients who suffer with a chronic discharge from the ear can trace its origin to an attack of measles or scarlet fever.

(*c*) Post-nasal adenoids, enlarged tonsils and chronic naso-pharyngeal catarrh are frequent causes and exciting agents in keeping up this condition through the connection of the middle ear and pharynx by means of the eustachian tube.

Most frequently adult patients who suffer with a chronic otorrhœa from the tympanic cavity, can trace its origin to some period of their childhood. That the same factors which acted as causes in childhood may also exist later in life is evident, but on account of the enlarging of the various parts and the greater power of resistence in the tissues of the adult, they are not so liable to the same disturbing influences. It is equally true that a certain amount of pathological condition existing in the naso-pharynx, in the way of adenoids, hypertrophies, chronic catarrh, etc., will not always answer as the cause of a chronic middle ear discharge, and we must look for some inherent condition existing in the middle ear itself as a cause for the persis-

tency of the discharge. I have frequently seen all pathological conditions of the naso-pharynx relieved and yet therewould persist an occasional discharge from the ear. That there is a close relationship, however, existing between these parts, all must admit, and he who ignores the nasal and naco-pharyngeal morbid states will never make a successful otologist.

When a chronic catarrhal condition of the middle ear has existed for some time, the mucous membrane and its contiguous parts are apt to be transformed into such a pathological state as to be themselves the exciting cause of the same. When we remember that, with the exception of the outer wall, the middle ear is a cavity enclosed in hard bone, and the nutrition of its lining mucous membrane is very easily interfered with, we are not surprised at the pathological conditions which we often find.

Among the first must be mentioned granulations upon the mucous membrane, which, as long as they exist will be a source for the production of a chronic discharge. Almost without exception in a chronic middle-ear catarrh there exists a perforation of the drum membrane, through which the discharge escapes; otherwise its only exit would be through the aditus ad antrum, or through the thin plate of bone which separates the tympanum from the brain,—a result, not, as Shakespeare says, "devoutly to be wished." Now with this secretion in the tympanum, it matters little how bland it is, one readily sees what a ready entrance is afforded to the various micrococci which will convert it into a purulent form.

Next in frequency must be mentioned polypi springing from the mucous membrane of the middle ear. These abnormal growths may be so small as to resemble granulations, or they may be so large as to protrude from the external auditory meatus. Usually they are by no means limited to one variety. Finally, a cause which of late has been recognized by otologists, as playing a prominent part in persistent purulent discharges from the tympanic cavity. This consists in a necrosis of some part of the bony walls of the tympanum, or of the chain of ossicles traversing the same.

TREATMENT.

Painstaking research into the history of every case; the correlation and comparison of all phenomena; a thorough knowledge of the normal and abnormal appearances of the parts, coupled with sufficient clinical experience, are necessary for the successful treatment of all ear diseases. Though but an atom as compared with the whole human frame, the field of otology is broadening every day, while the literature upon the ear alone would nearly fill an ordinary book-case. Certainly there is no brighter outlook in all the realm of medicine than is shown in the advances made in the surgery of the middle ear. While there may be extremists (they exist everywhere), yet with the conservatism which is being manifested and the large amount of clinical experience which is being added daily to the literature of the subject, we may hope for yet more brilliant results.

Every pathological condition must have its cause and, though we may not be always able to trace it, it is our duty and our professional gain to go thoroughly into the history of every case to determine, if possible, its *fons et origio*. For instance, the large majority of children who suffer with a chronic otorrhœa are also afflicted with some constitutional dyscrasia, hence it is only by the combination of the internal and topical applications that we can hope to bring about the most satisfactory results.

It is not my purpose to discuss the internal medication, for that can properly be left to the good judgment of every physician, but to go into the local management of these chronic discharges from the middle ear. Were I limited to one word as the foundation stone for the successful treatment of this class of diseases, it would be, *cleanliness*. Every secretion which remains blocked up in any cavity is a continual source of irritation and the cause of pathological changes, hence it should always be removed.

The treatment in children and in adults differs but little, save that in the former the parts are more delicate, smaller and, in some degree, less accessible. Whenever the discharge is active and very profuse, especially in children, the secretion must be frequently removed by syringing the ear with some antiseptic solution. The best in my hands has been a saturated solution of boraic acid. In very young children instruct the parents or nurse to use a soft rubber Davidson's ear syringe; in this way the parts will not be injured should the child grow obstreperous. The

physician himself should see the patient every other day, directing the nurse not to syringe the ear before coming to the office, in order that he may see any changes in the character and amount of the discharge. Having cleansed the ear himself by thoroughly syringing, the physician should dry the parts with cotton. If there exists a good-sized perforation in the drum membrane, the middle ear should be carefully inspected. In babies this is very difficult, so that occasionally one has to be content with the following procedure, which thus far has been eminently satisfactory to me. After syringing and drying the parts, the external canal is filled with pure listerine which is allowed to remain for five minutes, when the parts are again dried with cotton. The deep portion of the canal is now insufflated with powdered boraic acid, the canal packed with iodoform gauze, its inner extremity having been dipped into iodo-carbolized glycerine while its outer extremity is left accessible for removal by the nurse. The nurse is instructed to remove the packing as soon as it becomes saturated with the discharge, and to again use frequent syringings with the boric acid solution. This method of treatment is repeated every other day at first, and then at longer intervals. Having treated a number of chronic otorrhœas in children and babies by this procedure, I have found it by far the most successful in the large majority of cases.

In adults the parts are more accessible and likewise the pathological changes found more multiform. With this class of patients I find that the daily treatment by the physician himself, if possible, is much more successful, and the time much shortened, than by allowing the patient to carry on the treatment at home, which, in the large majority of cases, is very unsatisfactory. If the perforation is large and in the lower half of the drum, the line of treatment recommended for children can be successfully used in these cases. Frequently, however, the perforation exists in the upper part of the drum and is very small in size. In such cases it is usually found that the discharge comes from the attic of the middle ear, and for the successful removal of the same the solution must be introduced by means of a syringe or pipette of very slender and delicate proportions through the small opening in the drum.

As a rule, when there has been a discharge for years, the whole or the greater part of the drum membrane is entirely destroyed. In such cases there usually exists some pathological condition of the mucous membrane of the middle ear or some necrosis of the bony frame-work. Red, papillary granulations most frequently occur. These must be removed before one can hope to cure the discharge, as likewise must polypi, which, as a rule, are only overgrowth of the granulations. The best way to remove the former is by cutting, and the latter either by the cold snare or the ring curette. With the removal of these pathological growths the middle ear must be continually treated with the antiseptic powders, combined with tamponning of the auditory canal with iodo-carbolized gauze.

If, as often happens, the patient is of such a neurotic temperament that instrumental manipulation in the ear is out of the question, we may use what is termed the "alcohol treatment," instituted and recommended by Prof. Politzer, of Vienna. This consists in the instillation of absolute alcohol into the middle ear, allowing it to remain for ten minutes at a time, to be repeated, at first, two or three times daily, and gradually diminished. At first the patient may not be able to endure more than a 50 per cent. solution, but this can gradually be increased until the full strength is easily borne. I have seen most excellent results from this method of treatment, granulations disappear, polypi shrivel up and the whole ear reach a healthy state.

Finally comes a cause which of late has been found to play such a prominent part in keeping up a chronic discharge that has not yielded to the ordinary methods of treatment. This pathological condition is found to consist in a necrosis of some of the ossicles or of the bony walls of the middle ear, which, so long as it persists, will ever remain an exciting cause. Necrosis has been found most frequently in some portion of the malleus or incus, and since the greater parts of these ossicles lie in the attic of the tympanum, one more readily suspects such a pathological condition when the discharge comes through a small perforation in the upper part of the drum. The diagnosis of necrotic bone is ascertained by means of the probe, and when such is discovered there is but one course to pursue and that is the radical operation of removal.

COMMUNICATIONS.

CROUP AND DIPHTHERIA. *

B. H. DETWEILER, M. D., WILLIAMSPORT.

Mr. President, Ladies and Gentlemen: The pathology and treatment of membranous croup has been encroached upon by bacteriologists to such an extent that to is no longer considered a disease, *sui generis*, but only an exudate, the result in diphtheria caused by the Klebs-Loeffler bacillus. Dr. Wilson, in his exhaustive article on Laryngitis, in the Theory and Practice of Medicine, Pepper, 1894, says: "So overwhelming is the preponderance of the unquestionably diphtheric cases, that many competent observers regard all cases as that of nature—an extreme view that finds ample justification in the fact that no criteria have yet been established by which the differential diagnosis between diphtheritic pseudo-membranous laryngitis and the so-called non-contagious membranous croup of the dualist can be made by the clinician during life, or by the pathologist after death, save only by the presence or absence in the exudate of the Klebs-Loeffler bacillus. In both the symptoms are same, the course and termination of the attack are not different. "Physicians who look upon every case of pseudo-membranous laryngitis as a probable case of diphtheria, enjoy the practical advantage of erring; if err, they do upon the safe side."

The celebrated Drs. White and Keen, in their late surgery, endorse the same theory. Were the theory correct in practice, the course of the physician would be clear; but to the older physician the demonstration of the unity of these two diseases is not as yet complete. They are two distinct diseases; membranous croup was one of our terrible diseases, blanching the cheek of every mother upon the slightest whistling cough of her darlings, before the more dreaded name of diphtheria was a household word. In 1856, I saw my first case of membranous croup, and it proved fatal. In 1858, the first case of diphtheria came under my observation, which then became epidemic.

The course of these diseases was widely different, but when the larynx became involved, their termination was the same—death. Dr. O'Dwyer says that one child in ten, with well marked symptoms of laryngeal diphtheria recovers under medical treatment—Dr. Wilson says under all forms of treatment the mortality ranges from 60 to 80 per cent., and that all cases should be treated alike, as for diphtheria. It is the fact of this large mortality which I especially wish to press upon your consideration.

I do not consider it necessary to call your attention to the anatomical construction of the larynx, nor the distribution of the squamous epithelium upon the lining tissues of the pharynx and mouth, and the ciliated upon the vocal cords; nor that these epithelial cells determine whether the exudation be croupous or diphtheric. This is the point that should be fully considered, and upon which the duality of these diseases depends.

Dr. Wilson says, "ciliated exudation is termed croupous and squamous diphtheric; hence, the German pathologists, are correct in speaking of this process as a croupous diphtheric inflammation." Croupous inflammation is in all cases the exudation that involves the vocal cords from their anatomical construction, or ciliated instead of squamous epithelium. If this exudation be exposed to the Klebs-Loeffler bacillus, there is no question of the attack being diphtheria; but should it be simply inflammation of the vocal cords, why not treat it as any other inflammation? Why wait till the exudation becomes formed; if diphtheric, the mortality is so great that it is almost hopeless? and if not, why allow this exudate to become so firm that it is equally hopeless?

The cause of death is mechanical obstruction in one case, and in the other, mechanical obstruction with septic poisoning, due to specific microbes. The patient will be a croupy child—probably its second night with a harsh, rough cough and high fever. The preceeding night it

* Read before the Medical Society of the State of Pennsylvania, 1894.

had a few paroxysms of croup, was restless, with some fever; during the day it was apparently well. There is no exudation in the throat and nose, nor any enlarged cervical or submaxillary glands. This is a case of acute laryngitis of childhood; but in the morning you find instead of convalescence, a short hacking cough with continued fever, and you are not so sure of your diagnosis. If there are bacilli of Klebs-Loeffler in the trachea below the point of observation, the child will die; but if the thickening of the vocal cords by this croupous exudation is simply inflammatory, why not treat it as for inflammation?

Twelve hours will determine whether you can restore the child to its mother's arms or have it die the slow death of strangulation, or modified by the happy intubation of O'Dwyer with its record of decimation. It is cyanosed—breathing with the clavicular space indrawn and its throat clasped with its tiny hands to avert strangulation. You place two or three leeches on the larynx with ¼ grain doses of calomel every half hour till the characteristic spinach stools are voided; after full depletion of four or five hours, you check the bleeding points, apply a blister, and the cough will diminish, the cyanosis disappear, and in a couple of days the child will be convalescent.

During this treatment, inhalation of steam with lime water will be grateful and curative. The first case that I treated in this manner was in 1867. The distinguished physician who called me in consultation stated the case was hopeless, and said that the boy must die. He was two years old. As a dernier resort, I applied two leeches, and in five hours applied a blister. He convalesced rapidly. I have had many such cases in these years—one especially, when the consulting physician insisted on tracheotomy, but after depletion, neither intubation nor tracheotomy were required. Another, when I saw the boy of two years at 6 p. m. on the evening of the second day, after a croupy night. At 9 the same evening I found him cyanosed—and so much oppressed, they could not hold him in his crib. I applied two leeches, and followed it by a blister. In 48 hours he was convalescent.

Should this exudate, even, be diphtheria located below the point of observation, the child may recover, but will probably die—as the treatment beyond the abstraction of blood is what is considered proper by many who pride themselves on their success in treating this terribly fatal disease; but if it is not surely diphtheria, and there is a bare possibility of it being a croupous exudation on the vocal cords, why not use the depleting and revulsive treatment, instead of relying upon the treatment that has a standard mortality of 60 to 80 per cent., and rely upon removing the immediate danger of strangulation by intubation or trachetomy? I select my cases, and in doing so, have not lost a single case of membranous croup, nor have had an intubation.

My mortuary record of diphtheritic exudation extending into the larnyx, is no better than my compeers. I am persuaded it is of importance that the recognition of the duality of these diseases be made early, and that it is not good practice to err, if err they do, by treating all cases of croup on the so-called safe side of diphtheria with its terrible mortality record, and that it is the duty of every practitioner to diagnose *early* every case of croup; if diphtheritic, treat it accordingly; if membranous, give it the advantage of depletion and revulsives, by the prompt administration of calomel in quarter grain doses, every half hour, till the characteristic spinach stools are secured; inhalation of steam from lime water, which dissolves the croupous exudate upon the vocal cords, which causes the disease; and prompt depletion for four or five hours by leeching, and followed immediately by a cantharidal blister, which treatment will result in certain and speedy cure. Without the help of intubation or tracheotomy, I have followed this course since 1867 without the loss of a single patient.

Phthisis.

Professor Bouchard prescribes:

℞ Beech-wood creasote..... 5j
Balsam of tolu..... 5ij¼
Terebinthine..... gr. xv
Benzoic acid..... q. s.

M. Make into 80 pills, and let 10 pills be taken daily.

Or,

℞ Beech-wood creasote..... 3iss
Codliver-oil..... Oij¼

—*Prescription.*

Leg Ulcers.

℞ Zinc oxide.....
Gelatin..... ...āā 20 parts
Glycerin.....
Distilled water..... ...āā 80 parts

—*La Med. Mod.*

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SATURDAY, AUGUST 25, 1894.

EDITORIAL.

THE PHYSICIAN IN THE EYE OF THE LAW.

From the first appearance of the physician and surgeon's sign on his office front until he rounds out his professional career, he is confronted by embarrassments. The sense of the meagerness of his knowledge, and its inadequacy to meet and settle satisfactorily the many intricate and perplexing problems inseparable from his science and art, grows rather than diminishes with added experience. All his days are anxious days, the more anxious if he is fortunate in the possession of a quick, enlightened, professional conscience, feels and acts in his work as if it was something more than a mere vocation; a consecration to the gravest and most responsible form of life service, instead of being something routine and merely mechanical.

Not least of the embarrassments, annoyances and perils which continually threaten the physician and surgeon, no matter what his education, skill and eminence may be, nor the length of his successful professional services, is prosecution in law courts for malpractice. The prosecution may be in criminal form, or what passes under the misnomer of a *civil* suit —or both.

The criminal is the less frequent by reason of the difficulties and risks involved, and for the further reason that in such cases the commonwealth, in the name of public interest and safety, is made a party.

For those prosecuted for wilful mischief the profession has no sympathy. It is only by the strong hand of the law that impostors—those who usurp the honored title of physician or surgeon—can be weeded out, and the ignorant and innocent protected from the impostures of the quack.

With the civil suit the profession has most concern. These are much too common, and however they may result, are always damaging to their victim, causing loss of time, annoyance, the payment of heavy fees, and not infrequently the besmirching of a worthy and honored professional name. The motives usually behind and prompting these civil suits are malice and cupidity, and not infrequently can be seen the stealthy, filthy, cowardly

hand of one who masquerades under the title of physician and surgeon. We have before urged through these columns that these causeless prosecutions can be largely faced down by a united and healthy sentiment of common professional brotherhood. The great body of the profession has no reason to fear the severest judicial scrutiny of its work and its results.

Those who pass through our best technical schools, in education and skill measure up to the criterion judicially established. The law too, is progressive, keeps pace with changed conditions and wisely increases rather than relaxes its requirements.

The trend of the high court decisions is to force the profession to keep abreast with the advances in medical science and art.

One of the most learned and eminent of Pennsylvania's jurists, in a Supreme Court opinion, clearly defines the legal obligations of the profession. He says:— "The law has no allowance for quackery. It demands qualification in the profession practiced. Not extraordinary skill, such as only few men of rare genius and endowment possess, but that degree which ordinarily characterizes the profession. And in judging of this degree of skill in a given case, regard is to be had to the advanced state of the profession at the time. Discoveries in the natural sciences for the last half century have exerted a sensible influence on all the learned professions, but especially on that of medicine, where the circle of truths has been relatively much enlarged. And besides, there has been positive progress in that profession resulting from the studies, the experiments and the diversified practice of its profession. The patient is entitled to the benefit of these increased lights. The physician or surgeon who assumes to exercise the healing art is bound to be up to these improvements of the day. The standard of ordinary skill is on the advance, and he who would not be found wanting, must apply humbly with all diligence to the most accredited sources of knowledge."

This opinion must be recognized as sound in its logic. And, as expressed by an Associate Judge, "It is important to the interests of society that the profession intrusted with the preservation of the health and lives of the community should be held to a strict rule of accountability. Men of true science will not object to this. They court investigation. But the incompetent practitioner and the designing empiric 'love darkness rather than light,' and the sooner they are driven by judicial scrutiny into other pursuits for which they are better qualified and where they can do much less mischief, the better for the public welfare. But it is equally important that professional services should be fairly treated, and that the skill and worth receive the protection of the law."

From these decisions and others, the correct rule would appear to be that physicians and surgeons must keep abreast of the times, and make use of the latest and most improved methods and appliances, having regard to the locality and general practice of the profession.

The locality in which a physician or surgeon resides is to be taken into account. One practicing in a small town or sparcely settled country district, is not expected to exercise the care and skill of one residing in and having the opportunity afforded by a large city. He is bound to exercise the average degree of skill possessed by the profession in such localities generally.

These judicial conclusions are founded upon good reasoning. Physicians remote from cities, though well informed in theory, are seldom called upon to perform difficult operations in surgery, and do not enjoy the greater opportunities of daily observation and practice which large cities afford. So the standard of skill may differ according to circumstances and locality. But it must be noted that the

tendency of our courts generally is to elevate the standard of learning and skill required for the practice of medicine and surgery, and they are growing to instruct juries in estimating what qualifications are necessary to consider the average skill, learning and experience of the profession, properly so called—that is of well educated medical practitioners and exclusive of quacks and mountebanks.

If the physician has the skill and does not apply it, he is guilty of neglect. If he does not possess it, he is liable for want of it. The essence of the contract is that he is to do his best; to give to the use and service of his patient his best knowledge, skill and judgment; that he will use reasonable and ordinary care and diligence in the exercise of his skill and the application of his knowledge, to accomplish the purpose for which he is employed. He is not responsible for want of success in his treatment, unless it is proved to result from want of ordinary care, or ordinary skill and judgment. The degree of care to be required in cases varies with the character and exigencies of the cases. He does not contract for extraordinary care, or extraordinary diligence anymore than he does for uncommon skill. The words, reasonable and ordinary are judicially used as equivalent words, and applied in their common acceptation. In the implied contract to exert his skill and apply his diligence and care, he contracts to use his best judgment. He is, however, responsible for disregard of the well settled principles of medical science—he cannot interpose his own judgment to that which is settled except at his own peril. This dictum has been carried too far, however, by some of our courts. Many old forms and methods of treatment, both in medicine and surgery have been pushed aside by science and a more extended experience. Our knowledge has been greatly advanced by men devoting themselves to separate branches of the profession.

Precedent does not amount to so much in medicine and surgery, as in law. Medicine has less veneration for old and clumsy methods, effete formulas—for forms of treatment which, if not positively mischievous and dangerous, are useless. In medicine it is no longer as the fathers testified but as the best tests of science testify. Within the generation of which we are part, the profession has grown away from what was the practice and almost general law of the profession, that of reckless and indiscriminate bleeding; they no longer deny cooling drinks to fever patients, as was almost universally the case thirty years ago. It is fearful to contemplate what penalty the poor physician would have suffered who thirty years ago would have had the *ignorance, the want of skill and care,* or the temerity to experiment by giving a fever stricken law judge a glass of ice water.

There is yet another dictum laid down in court decisions which makes medical and surgical experiment penal and renders the physician and surgeon liable for civil damages. It would be interesting and of inestimable value to the profession to have some learned jurist define what constitutes *experiment* in medicine and surgery. There is not a drug prescribed, nor any form of applications of the knife that did not begin as an experiment. Everything, from Government down, that blesses civilized society, that heals, relieves suffering, mitigates hard human conditions, sustains human hope and enhances man's happiness had its beginning in experiment, not *reckless, but thoughtful, sober, rational experiment.*

The much that has been and is being accomplished by the medical and surgical profession is but feebly prophetic of the possible. The word is, *go on,* and the law will helpfully keep step. There are many matters, both in medicine and surgery yet to be determined by experiment, and the law will recognize that there is no larger

or more promising field of progress and one not to be bounded or limited by judical decision. The statute to be wise must always respond to human need.

All medical practice is based upon certain theories, these theories are constantly undergoing modifications under a changing and better light. Many an old hypothesis through the force of its absurdity has been pushed to the wall. The effort of modern teaching is to remove medical and surgical theories as far as possible from all error. In late years the changes in operative appliances and methods have been numerous, and both medicine and surgery have grown more and more to be affairs of science. The processes of this growth are infinite—the end will never be reached.

In general the law does not look upon the physician and surgeon with distrust or judge his work and its results with an illiberal spirit. The law recognizes the doubts and uncertainties which surround the medical and surgical practitioner, and that the errors and mistakes to which he is unavoidably exposed may well furnish a satisfactory explanation of unfavorable results, that cases of sickness and accident apparently similar, may yet be rendered substantially different by seemingly slight circumstances easily overlooked and sometimes of difficult detection.

In surgery, aside from the mere matters of manipulation or method, the courts recognize that a surgeon has to contend with very many powerful and hidden influences, such as the habits, hereditary tendencies, vital force, mental state, and local circumstances of the patient, it excuses errors of judgment when not so gross as to be inconsistent with reasonable skill and diligence.

Care is an important element in all cases, it implies the use of such watchfulness and precaution as is fairly commensurate with the danger to be avoided, judged by the standard of common prudence and experience. All will admit that the scrutiny of the law cannot be too severe where the issues of life and death are involved, but there should be justice to the physician—wisdom and an enlightened justice should hold the scales.

ABSTRACTS.

SOME REMARKS CONCERNING MERCURIC BROMIDE OF GOLD AND ARSENIC, WITH ESPECIAL REFERENCE TO ITS USE IN THE TREATMENT OF NEUROTIC CONDITIONS OF SPECIFIC ORIGIN.

[ABSTRACT]

THOMAS HUNT STUCKY, M. D.,* LOUISVILLE, KY.

At a recent meeting of this society, I had occasion to mention the use of the bromide of gold and arsenic in epilepsy. Being, comparatively speaking, a new drug to this market, it was thought of sufficient interest to bring it more prominently before the fellows.

The solution of mercuric bromide of gold and arsenic after the formula of Dr. Barclay, of Pittsburgh, is of a beautiful red color, does not deposit, odorless, and tasteless; dosage ranging from five to twenty drops, each drop containing 1.32 of a grain of gold, 1.16 of a grain of arsenic, and 1.32 of a grain of mercury salts. It does not disagree with the stomach, nor relax the bowels. It will produce ptyalism, yet with less recession

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of the gums than is produced by mercury or the iodides.

Dr. Wood, in his admirable paper, read at the meeting of the Mississippi Valley Medical Association, in Indianapolis, laid great stress upon its efficacy in diseases termed scleroses, incipient phthisis, arthritis deformans, in syphilitic diseases in its various forms, in hemiplegias, etc.

I have the pleasure of exhibiting three cases to-night, and a record of eight others, all of whom, with one exception, belong to the neuroses.

CASE 1.—No. 436 of my college clinical records; diagnosis hemiplegia. W. O. M. æt. 28, married; residence, Denver, Colorado; family history, fairly good; occupation, proprietor of theatre. Habits: had used alcoholic beverages rather freely for five years. February 28, 1893, following a two-days drunk, patient vomited with great straining; passed into unconsciousness lasting seventy-two hours; complete dextra-hemiplegia, ataxia, aphasia sinistra-hemiplegia supervened. December 2, 1893, patient presented himself at clinic, having complete paralysis of the right side, could not count fingers with left eye; tongue on protrusion, pointing sharply to the right; corners of the mouth greatly depressed on right side; arm on the right side could scarcely be lifted away from the body; leg dragged after the patient in characteristic manner; all reflexes greatly exaggerated. Patient could answer yes and no to questions, but could not tell where he lived, and had to be brought to the college. Was placed on liq. arsenic et hydrarg. iodide, five drops in a wine glass of water, after meals.

December 6th, was given the mercuric bromide of gold and arsenic in five drops, doses after meals.

December 9th, patient developed la grippe, treatment was discontinued, and acetanilide given.

December 13th, condition improved, and mercuric bromide of gold and arsenic was given again.

December 20th, some improvement, medicine continued.

January 3, 1894, dose increased to ten drops.

January 26th, patient answers all questions with comparative ease, came to the clinic by himself, can lift his arm as high as his shoulder, the characteristic tremor taking place when he attempts to raise it still higher, can walk tolerably well; treatment continued.

February 7th, continued improvement.

February 14th, eating and sleeping as good as before attack.

February 28th, steady improvement in gait and speech.

March 10th, doing well.

March 17th, dose increased one drop every other day.

March 21st, has regained self confidence.

April 4th, walks miles, does not have to use cane, no longer drags his foot. Secondary contraction of a slight degree has taken place in the fingers only. Students not familiar with the case could not detect any depression at an angle of the mouth. Sight in left eye much improved, though outer half is still impaired. Tongue points nearly in the median line. Patient steadily improving.

Case 2.—J. R. æt. 35, tobacconist; personal and family history good; he has never had syphilis nor rheumatism. His trouble began about eighteen months ago, with the characteristic pains in the lower extremities. These pains were felt at irregular intervals, sometimes daily and sometimes not for a space of a week or ten days. A short time afterward he noticed the change in gait. He also had frequent attacks of sick headache, three or four seminal emissions weekly, and difficulty in holding the urine. These symptoms ceased about four months ago, but the ataxia has greatly increased, and the pains still continue. He has noticed in the last three or four months a decline in the sexual power. He was admitted into the Hospital February 1st, 1894. The skin, reflexes and the knee jerk were normal; there were no sensory symptoms; he had the Argyll-Robertson pupil; coordination was so imperfect that he was unable to stand with the eyes closed, and the feet together; and he could hardly make his way from one place to another.

In treating this case I started February 28th, with eight drops of the mercuric bromide of gold and arsenic three times a day. From March 14th to April 1st, the dose was increased one drop each day. The total quantity given during thirty-three days being 1,245 drops, an average of thirteen drops at each dose.

Case 3.—W, P. æt. 32, painter; personal and family history good. His illness

dates back to February first, 1892, the symptoms being constipation, difficulty in voiding urine, stiffness and soreness in the knees. In a short time the legs became useless. In six weeks he was about on crutches, being at the time under treatment at Hot Springs. He entered the Hospital July 7th, 1892; at that time there was very little sensation in the left leg, the condition of the right being about normal. He had incontinence of urine and feces.

Commencing February 7th, I gave him five drops of the mercuric bromide of gold and arsenic after meals; the dose was increased daily until eleven drops were being given, making the average dose given during the course, of ten drops, thrice daily. Bladder and bowel symptoms restored.

Case 4.—Mr. S. (I will refer to this case briefly, not being able to get the patient to come here tonight.) There was loss of sensation in right side of face; difficulty in co-ordination; ptosis; chronic constipation; loss of bladder control; reflexes lost. Four months treatment followed by complete relief.

It could hardly be coincident that such decided changes for the better, should have occurred in so short a time.

There have been and are now many preparations on the market which are not solutions of bromide of gold and arsenic, but bromide of gold with hydrobromic acid, arsenic acid, and arsenious acid. In the Annual of the Universal Medical Sciences issue 1891, Dr. Hare in his article on Experimental Therapeutics concludes in reference to the action of bromide of gold:

(1) Bromide of gold undoubtedly inhibits the cortical motor centres, even when administered in small doses than other bromides. After an internal administration of bromide of gold in the dose of 1½, to 3, 1-10 grs. to the kilogramme of the animal's weight, even the strongest and very prolonged electric stimulation of the cortex fails to bring about any epileptic seizures. To obtain the same result from bromide of potassium, the latter should be introduced in the dose of 9½, to 10¾ grs. to kilogramme. While bromide of iodium should be given in still larger quantities.

(2) Irritability of individual motor centres as determined by the appearance of contractions in corresponding muscular groups is depressed by bromide of gold in but trifling degree.

(3) Excitability of the white substance of the motor region remains intact.

(4) The drug seems to affect mainly the tracts of communication between individual motor centres, as well as between remote areas of the cerebral cortex.

(5) It does not appear to possess any special cumulative action. This action cannot be due to the amount of bromide present therein, since it is in the weakest (55 per cent. by weight) of the three, white bromide of sodium is the heaviest (77.7 per cent.) the potassic salts standing midway.

In the Annual of the Universal Medical Sciences, year 1892, an authority states "Better results can probably be obtained if the drug be given hypodermatically."

The opinion as to the efficacy of gold in disease has been indeed varied: In an article Med. Rec. Vol. 34, page 802, September, 1888, this appears—referring to article on gold and arsenic—"It is highly digestible," while farther on this startling statement appears,—"There is probably not a sound clinical observation, showing that gold possesses any special therapeutic efficacy in any disease."

The old therapeutists limit its field of usefulness. Bartholow speaks most highly of it, recommending the double chloride in waning sexual force, in granular and fibrous kidney, in melancholia, in atonic dyspepsia, catarrh of bile ducts, etc. The claim made that it produces auric fever has not been observed, nor have I seen any evidences of gastric irritation. In a case of syphilitic nodules with marked cephalagia, there was a rapid subsidence of the nodes and relief of the head, by the mercuric bromide of gold and arsenic, proving clearly that there is a most decidedly alterative influence exerted.

The fact that the sedation produced by the bromide of gold is greater than that by the salts of potash and soda, should give it a front rank in the treatment of epilepsy, fortified by the alterative influence of the gold and the tonic effect of the arsenic. It has long been recognized that arsenic is the treatment for chorea. In three cases of this disease treated by bromide of gold and arsenic, the results were all that could be desired.

The solution of gold as prepared by Johnson & Johnson:

1st.—Increase the appetite.

2nd.—Do not irritate the stomach nor disturb the bowels, seeming to stimulate peristalsis without sufficient irritation to produce purgation.

3rd.—Do exert decided powers of alteration, sedation where there is irritation, yet stimulation to waning powers.

4th.—Are indicated in the majority of diseases affecting coördination.

5th.—In fact, entitled to a trial in all neuroses.

SOCIETY REPORTS.

LOUISVILLE MEDICO-CHIRURGICAL SOCIETY.

April 6, 1894.

[STENOGRAPHICALLY REPORTED BY C. C. MAPES.]

GALL-STONES.

DR. A. M. VANCE: I would like to show three or four little specimens of gall-stones removed from a woman twenty-six years of age with the history of acute pain, and beginning sepsis with a tumor low in the abdomen. The gall-bladder was found very much enlarged, filled with mucus and subsequently quite a quantity of pus came from the deeper parts of the sac. The diagnosis was not made absolutely before the incision, though after the woman was on the table the consensus of opinion of those present was that the trouble was the gall-bladder. I also show you several specimens from a patient operated upon some years ago. The case was similar to the one I have just reported, and my only object in mentioning it is to show the different character of the calculi.

I do not believe there were any gall-stones in the cystic duct, since excessive flow of bile has occurred so soon. The obstruction was probably inflammatory rather than from stones. A great deal of bile came away at the forty-eighth hour. The woman has made an uninterrupted convalescence.

DISCUSSION.

DR. WM. BAILEY: In the last case reported by Dr. Vance the difficulty in diagnosis was considerable I have no doubt; from the tension of the muscle on that side it was difficult to define, but after she was under the anæsthetic it was possible to make a more accurate conclusion as to where the tumor really was. However the incision on account of the uncertainty was a little high for the appendix and a little low for the gall bladder. It was really a compromise. If there had been a positive diagnosis the incision would have been properly made, and Dr. Vance could have more readily explored the opening of the cystic duct into the gall bladder, but from the position of the incision without enlarging it too much, he was not able to reach so as to thoroughly explore the cystic duct. I think it probable as Dr. Vance has said that the duct was closed by inflamatory processes and not by gall stones. The intensity of the pain was not such as to indicate the presence of gall stones in the cystic duct, but rather from an accumulation and inflamatory process that was going on in the gall bladder.

Dr. T. H. Stucky read a paper entitled:

SOME REMARKS CONCERNING MERCURIC BROMIDE OF GOLD AND ARSENIC, WITH ESPECIAL REFERENCE TO ITS USE IN THE TREATMENT NEUROTIC CONDITIONS OF SPECIFIC ORIGIN.

(See page 257).

DISCUSSION.

DR. A. M. VANCE: In the third case shown was there any history of lead colic?

DR. T. H. STUCKY: The patient gives no history of lead colic.

Dr. S. G. DABNEY: I saw the fourth case referred to by Dr. Stucky; there was complete paralysis of the motor oculi nerve. The gentleman of course had ptosis, and there was also some protrusion

of the eye ball. At the time I saw him there were also some symptoms of beginning locomotor ataxia not very marked at that time but perhaps developed later. I have no doubt the agent mentioned by Dr. Stucky is valuable in many cases, but I have in mind cases similar to those he reports that recovered under large doses of the iodides. Two were cases of complete paralysis of the motor oculi nerve which made a good recovery. One of them was a woman who also showed some symptoms of locomotor ataxia. I wish Dr. Stucky had been more explicit in his remarks concerning Hemianopia in the first case he reported. I presume it means half vision of each eye, i. e. one half the field of vision of each eye is lost.

Dr. Stucky will recall a case of this kind occurring in a lady that we saw some time ago, who had paralysis, and well-defined hemiopia. She finally recovered from the paralysis, but the half sight remained the same. Dr. Hays will also remember a similar case; the patient was a man who had no well-defined paralysis, but had a great many cerebral symptoms and a clearly defined case of hemiopia. The other symptoms have all gradually improved, but the half sight remains exactly as it was. This symptom of hemiopia may be due to disease of the optic nerve tract, or it may be due to a lesion of the cortex of the brain. As a rule it is not improved even when the other nervous symptoms disappear. When paralysis for instance disappears, the heminopia as a rule remains. It is not a frequent symptom and I think it rather peculiar that I have seen two or three cases in my experience in Louisville. I remember having heard one of the occulists here, whose experience is larger than mine, say that he had not seen a single one.

Dr. Wm. Cheatham: I think Dr. Stucky's cases are all too recent to show what effect his treatment is going to have, except in the third case where improvement has been so marked. I would not be inclined to attribute the improvement entirely to the remedy. Especially in locomotor ataxia it is about as uncertain as in epilepsy when you are going to have improvement, and whether this improvement comes from the remedy. I have seen cases where the eye muscles were involved in locomotor ataxia and the patients have gotten apparently well so far as the eyes are concerned without any treatment. We all know that locomotor ataxia has periods of rest, especially in the early stages of the disease and where the eye muscles only are involved, these cases often apparently completely recover without any treatment. I call to mind now the case of an army officer who afterward went east and I took him to see Dr. Hammond, also Dr. Knapp, who diagnosed locomotor ataxia. This man at one time went four years between attacks. He had double vision, and sometimes complete ptosis. He had specific, locomotor ataxia. The next attack came on in about two years, with complete ptosis of the left eye only. On account of these periods of rest it is as I stated before very hard to determine just what effect any remedy is going to have; therefore I think Dr. Stucky's cases are to recent to say positively that the medication is the cause. His report, however, is one of much interest.

Dr. Wm. Bailey: Dr. Stucky has presented us with an exceedingly interesting clinic, and I want to say moreover that I am gratified because it is in a department of therapeutics that has been very uncertain in its effects. Certainly the cases presented to-night with the history as detailed, should induce us to give the remedy a trial at any rate. I am sure that Dr. Cheatham is right as to the uncertainty of these cases, the progress and natural history of them is so marked even under the most thorough treatment. I have had a case of epilepsy on bromides without an attack for eighteen months and believed that the remedy did a great deal good; very much to my mortification he had an attack yesterday and one again to-day, notwithstanding he has been kept upon the bromides constantly. I am inclined to think from the presentation of the subject in the papers and by the discussion to-night, that I shall give the preparation of gold and arsenic a trial at the first opportunity. It certainly offers us something where we need much.

Dr. Wm. Cheatham: I have used the bromide of gold and arsenic in one case; the man has atrophy of both optic nerves and is also said to have syphilis. He has been on anti-syphilitic treatment, however, with no improvement. He took the gold, I think, three weeks, but there was no perceptible change. Vision is reduced to 6–200. He has also had two courses of strych[illegible]

nitrate hypodermatically, with no improvement.

DR. H. A. COTTELL: I am sorry that I came too late to hear the essay, but take it that the remarks of Drs. Bailey and Cheatham set forth the facts pretty clearly. Their experience is the common experience of every man who treats such cases—their issue is very uncertain. A case of locomotor ataxia came under my care four years ago. The patient went through the hands of several physicians, growing worse all the time and was finally forced to go to bed. He had lightening pains, which were so severe that he was kept under the influence of morphine for a considerable time. Although the case was non-syphilitic he had been given iodide of potassium, in fact, I believe, almost everything except the bromide of gold and arsenic. He finally went to Pennsylvania somewhere to see a priest who was said to work miracles. He was given a prescription of wine of cocoa and nitroglycerine and made a seemingly complete recovery, although to the practiced eye his gate is slightly ataxic.

I had another case in the person of a Jewish man—a well marked case of locomotor ataxia of syphilitic origin, at least such a history was elicited. This man seemed to be improving under iodide of potassium, and coming to me one day, he asked, if I thought it would do him good to go to the country. I told him I thought it would, if he would simply go there and rest, that he must not take much exercise. He went down in Breckinridge County, and while there fell in with an old fashioned German doctor, who told him that his disease was not locomotor ataxia, but simply inflammation of the spine. This doctor put him under treatment, applying poultices and plasters, and at the same time drugging him with herbs. The man grew rapidly worse, returned home, became bedridden, and, I believe, died. He was never able to get out of his bed after his trip to the country. What this country doctor did to make this patient grow so suddenly worse, I cannot understand. These two cases represent the two extreme conditions. We have all seen ataxic symptoms progress and diminish, oscillating between these two extremes. We see, however, many cases that have been moderately ataxic for years, and it is to be hoped that something has been found that will make an impression upon the lesions which lie behind the symptoms. One of the most discouraging things in the life of the specialist in nervous diseases, is that there is so little real therapy in the practice. In consequence of this the temptation to substitute quackery in this department for the principles of scientific medicine is great indeed. I am sorry to see that some eminent men in this country have found the temptation too much for them. If any remedy can be found that will make an impression upon scleroses, posterior, lateral or disseminated of non-syphilitic origin, we all shall hail it with delight. At the last International Medical Congress, Strümpfel read an able paper on scleroses, taking the ground that the only curable cases were those of syphilitic origin. I hope that the bromide of gold and arsenic is the remedy we have been looking for.

There is something very peculiar about the heavy metals like gold, platinum, etc. They have very little mechanical effect as we know. It has been found that chloroform will take more gold in the presence of nitric acid, so that all the double salts can be made—chloride of gold and sodium, bromide of gold and sodium, etc. They are chemically, I suppose, what would be called double salts, yet technically they are not exactly double salts. As to what becomes of this medicine, whether it is eliminated by the kidneys as bromine, or whether the arsenic is turned loose in the system, or the gold eliminated as chlorine, would be interesting. It is something like the question brought up by Dr. Howard some time since—the treatment of goitre by the use of iodine under the plan known as electro-phoresis—he alluded to a point which will perhaps help us out. The idea was that iodine being driven in by galvanic current, the iodide of potassium was decomposed and active iodine turned loose in the substance of the goitre. It is a well known fact that many beneficial results are obtained from elements in what we call the nascient state, and many chemical combinations may be affected in that way that would not obtain under different conditions. It is possible that the gold may carry a molecule of arsenic into the economy in this combination and give it up in such way as to cause the arsenic to be more effective than it would in any other way.

DR. T. H. STUCKY: My sole object in showing these cases and in bringing the subject before the Society was not to place myself on record that gold would cure these conditions, but it struck me as being a very peculiar coincidence that such marked results and such marked improvement should be manifested in so short a time. Out of a series of eleven cases of neurotic troubles in hospital and private practice, I have been surprised at the amount of improvement. One case is a very prominent man in a fashionable portion of the city, who has been living for a long time almost the life of a child, and who has been under the treatment of many neurologists. While visiting his wife, she heard of my having treated an other case and suggested the same remedy be given this gentleman. He had incontinence of urine, incontinence of feces, entire loss of control of the lower half of his body, lightening pains in the legs and over the region of the stomach, rest disturbed, and had been in about this condition for four years. I first gave him ten drops of mercuric bromide of gold and arsenic three times per day. He had to be lifted in and out of bed; his legs would become crossed in bed and his wife would have to uncross them at night; he would urinate involuntarily during the night; he was afraid to to go out in his carriage fearing he would have an involuntary evacuation of the bowels. He was given this treatment for two months without any apparent improvement, when I increased the dose one drop per day until I secured the effect of the arsenic; the dose was increased until he took twenty-five drops three times a day. He waked up one night complaning of a tingling sensation all over his body; I then ordered the medicine reduced to ten drops three times per day. His incontinence of urine has ceased; he has perfect control of the sphincter ani; he has considerable motion and strength in his legs, and can get up and down without assistance. There has been no further improvement, but certainly this has been a great advance over his previous condition.

There is another point about this solution that has struck me with force, that is its possible or probable usefulness in the treatment of glandular and joint troubles. It combines well with lime and salicylate of calcium. I have just had a case of enlargment of the cervical glands with calcareous change, which has been treated with bromide of gold and arsenic with a decided reduction in the size of the glands. His father gave a syphilitic history, and this patient had been treated for syphilis. I have also tried this remedy on other cases of glandular enlargments, and have been surprised at the rapid subsidence.

Another case, a prominent man who returned from Hot Springs some time ago, much emaciated, taking daily 450 grains of iodide of potassium; he also had unsteady gait and other nervous symptoms. The iodide of potassium was discontinued and bromide of gold and arsenic administered. While there has been no marked improvement in his gait, there has decided improvement in flesh.

Another case gave the history of pulmonary hemorrhage spitting of blood, yet there is no marked change to be found in the lung. She has been placed upon this agent, starting with four drops increasing one drop every day until she is in better condition and weighs more than she has in six years.

These cannot be coincidences, and the cases I have referred to demonstrate the usefulness of this agent in the treatment of syphilitic lesions. We have had several cases of syphilis in the clinic at the college that I did not refer to in my paper treated with this agent in all of which there has been a more rapid subsidence of all symptoms than usually obtains under the use of mercury alone. There has not been the marked ptyalism, nor the marked retraction of the gums, and the eruption has dried up very rapidly. The fact then that it enters into combination with lime, that it enters into combination with mercury in the form of a solution and is probably eliminated by the kidneys shows that it has a decided advantage over the old chloride of gold and sodium, which was not readily assimilated. Experience thus far has proven that this solution has a great advantage over iodide of potassium in that it does not produce gastric irritation. None of the cases in which it has been used have exhibited any gastric symptoms; it has produced no interference with digestion or the secretions, and it not only seems to have an especial action upon the constitution, but proves to be a

general tonic in its effect throughout the entire alimentary tract.

I have simply shown these cases with the hope that it might be of service in suggesting a new field of experiment. There is one more point upon which I would lay special stress. I made the error myself a year ago when the first specimen was sent to me by Dr. Barclay, of Pittsburg. We are inclined to discard its use too soon. We must push it like we do iodide of potassium for its full effect. I believe it is a good addition to our therapeutics and that its outcome is destined to be a great one. Certainly it cannot be explained that these three cases I have exhibited, and the others that have been treated, would have improved so markedly without its use. It has not been my experience that cases of locomotor ataxia suddenly turn in three or four weeks without treatment into a condition of decided improvement. It has not been my experience that within three or four days cases showing evidences of involvment of the lateral columns begin to assist themselves. It is not my experience that cases of paresis of a certain lot of muscles begin to take on action, and that patients state they can feel a tingling in that part, which I do not attempt to explain; nor do I attempt to localize its action exactly in these cases, I simply present the patients and give my experience in their treatment to emphasize my statement that I believe this remedy has a wide field of usefulness in the cure of neurotic conditions.

I have used bromide of gold and arsenic in two cases of incontinence of urione; in one of these there has been decided relief. I would like to call especial attention to its service in the treatment of choreic conditions; we get not only the benefit of the arsenic, but the sedative action of the bromide and alterative effect of the gold. I have used it with success in three cases of chorea without any other treatment.

CONTINUED DISCUSSION OF APPENDICITIS.

Dr. H. A. Cottell: When I proposed at the last meeting of this Society that the subject of appendicitis be again taken up at this meeting, it was not with the idea of entering seriously into the discussion myself. It is the old controversy of surgery vs. medicine. In these cases of so-called appendicitis, I suppose they are not limited strictly to the vermiform appendix; there is such a thing as typhilitis and perityhilitis as well as appendicitis, and it is not until the surgeons knife has brought to light the exact condition of things, that we are sure of our diagnosis. For instance if I should report a number of cases I believed to be appendicitis that got well without operation, the surgeons might say "how do you know it was appendicitis." In a certain proportion of cases I should have to confess I did not know whether it was or not.

In the course of practice extending over a period of twenty-two years, I can recall six cases of appendicitis, or inflammatory trouble involving the appendix or cæcum. In all those cases I had the benefit of able consultants, and in all except one I had the advice of one or more eminent surgeons. It has always been my rule when I made out the diagnosis of trouble in the appendicæl region to send for a surgeon that the patient might have the benefit of early operation if it was deemed advisable.

The first case was in the person of a child twelve years old; I had a physician in consultation; no surgeon saw the case. It was unquestionably one of intestinal obstruction from fecal accumulation in the cæcum; it could be easily made out. Under deep injection, the fecal accumulation finally worked loose and the patient made a good recovery.

Some time after that a little girl about the same age developed a decided tumor in the right iliac region with great tenderness; it was unquestionably cæcal and inflammatory. I called Dr. W. O. Roberts to see the case as soon as I was satisfied of the diagnosis, that the patient might have the benefit of early operation. He counseled against operative interference and the patient recovered.

The third case was one of somewhat obscure diagnosis; I would not contend that it was a case of inflammatory trouble in the region of the appendix, although the bowels were obstructed, and the symptoms seemed to indicate appendicitis. This case terminated spontaneously. Drs. Turner, Anderson and Roberts both saw the case in consultation, and both advised against operation.

The fourth case, in the person of a little boy about six years of age, was very remarkable to me in its outcome and history. There was great tenderness in the right

iliac region, with a tumor which was very marked. I saw the case in the evening, and as I expected to leave the next morning for Chicago, after visiting the patient with Dr. Roberts I left the case in his charge. There was no question as to the diagnosis, and we believed it was clearly a case calling for operation. Dr. Roberts decided to operate. The surroundings were such that an operation there even in the hands of this eminent surgeon was not to be thought of, and he tried to persuade the family to send the child to the Children's Hospital. I was absent for nearly four weeks; on my return I thought of the case and went as soon as possible, to inquire as to the outcome of the operation which I supposed had been performed. I was told that the family would neither send the child to the Hospital nor consent to an operation; but that the child had made a quick recovery.

The fifth case I saw in consultation with Dr. J. L. Howard. A clear diagnosis had been made; Dr. Roberts had also seen the case. The patient (a man) had grown suddenly worse in the night, and was in a state of collapse when I saw him. Dr. Roberts operated the next morning. It was with great difficulty that the appendix was found. It looked at one time as if the surgeon would have to give it up, but the appendix was finally reached and was found to be perforated. The patient had suppurative peritonitis at the time operation was performed, and the result was a fatal one, necessarily so I think on account the advanced condition of things and the weakness of the patient. Surgery did not have a fair test in that case. Up to that time all the cases of this trouble I had seen, none of which had been operated upon, had terminated in recovery.

The sixth case was one which was also seen in consultation with Drs. McMurtry, Larrabee and Ouchterlony. The patient was a child two years of age. It proved fatal. I am quite sure an operation would have been performed if the conditions would have permitted. Dr. McMurtry advised against the operation, giving as his reasons that the child was entirely to young to bear it. Besides its condition was a very extreme one. The expectant plan of treatment was therefore carried out, but with a fatal result.

Dr. A. H. Vance: Did you ever lose a case of acute peritonitis in the male?

Dr. H. A. Cottell: I do not recall a case that has died where a diagnosis of peritonitis was made. I remember one case which Dr. Anderson will also recall, occurring in a little boy. Diagnosis of appendicitis was never made, nor was diagnosis of peritonitis made. However, the child had symptoms which rather led us to believe that might have been the trouble; he died of heart failure. He never had a tumor, a dose of salts passed through his bowels the day before he died; he had no tenderness nor distension of the abdomen, and the truth of the matter is, I do not know what was the matter with him. We consulted as to the condition, but nothing definite was arrived at. It may have been a case of appendicitis.

Dr. J. A. Larrabee: Without any data, without statistics and without any record of cases, I simply wish to say that I have treated a great many cases of peritonitis before we attached the importance to appendicitis that we now do, and the entire ignorance of that cause, and while doing so and reflectsng upon this cause in our present enlightened and advanced state many of the cases might be claimed to have been connected with lesions of the appendix. Certainly it has been pretty thoroughly demonstrated at this time, but when I look over my practice I can recall many cases by memory alone of this character that have gotten well without operation. I can also recall cases that have died. I had one case very recently of peritonitis occurring in an infant three weeks old. I do not suppose that was connected with the appendix, but it was a typical case of peritonitis which recovered; it was syphilitic in its nature. I cannot report the cases by name and date, but I have lost cases of peritonitis in the male.

Just here I would call attention to a proposition I made at the last meeting, that each member of this Society hereafter report each case occurring in his practice of lesion in this region, whether it be appendicitis, peritonitis or otherwise, that a record may be made of it.

Dr. J. L. Howard: In the discussion of appendicitis at a recent meeting of this Society I believe the point was brought up that surgeons in England were not now operating very extensively for this condition. In the March 24th number of the *British Medical Journal* Mr. Jessop re-

ports four cases of appendicitis of the type that Dr. Cartledge laid so much stress upoh, *i. e.* stenosis by a fibrous band near the proximal end, the distal portion being very much distended with mucous, but without perforation.

Dr. Grant operated on a case of appendicitis last week at the clinic, in which the symptoms were very marked and the diagnosis unquestionable. When an incision was made an abscess was found filled with pus, walled off from the peritoneal cavity and entirely mural. No adhesions were broken down as it was not deemed wise to invade the cavity which was not involved, but the surgeon stated that he believed the appendix was the *fons et arigo mali* and that the appendix would be discharged with the pus.

Of course in a case of this kind no one can deny that opening of the abscess was the proper procedure.

Dr. Turner Anderson: In regard to peritonitis in the male, I want to say that I have a very distinct recollection of two cases I have had where the death certificates have been signed, in all probability by myself, the cause of death being given as peritonitis, However, both these were clearly cases of traumatic peritonitis. One was a little boy that had been punched in the abdomen by a playmate, in being forced into line marching from school. He died five or six days later from peritonitis. Another occurred in a boy fifteen years of age, who also gave the history of having been struck in the abdomen by some means.

I stated at the last meeting what I have said on many occasions, that I did not regard perityphlitis of very much consequence until after the nomenclature had been changed; until it was denominated appendicitis, I had very little concern in regard to the disease. I stated as a personal experience extending over more than a quarter of a century that I had not seen a case which had terminated in death. I simply gave this as a personal experience; I do not doubt what other men say; I do not question the veracity of other reports, nor do I question the fact that there are cases which should be operated upon. I remember very well the case Dr. Cottell refers to; there was a large tumor in the classical region, and it looked very much like a case which ought to be operated upon, and that very promptly; Dr. Roberts also saw the case, and I told him perhaps it was a case demanding operation and I would sanction it if he desired to operate. The mother declined to have the operation performed. I also made the statement at that time that I had seen many cases of a similar character which had gone on steadily progressing in a satisfactory way and finally recovered, and I believed that this boy would also get well without operation, and he did get well. It was only a short time before this that Dr. Roberts had seen another case with me where there was a large tumor, and where it looked as though suppuration and rupture might occur. Operation was proposed and refused. The case went on under ordinary medical treatment and made a satisfactory recovery.

Dr. A. M. Vance: I would like to exhibit an appendix taken from a man twenty-three years of age, after having suffered with appendicitis four days. The patient was in a condition of active sepsis; there was quite an accumulation of very offensive pus, and this necrotic appendix was found. I first saw the patient at three o'clock to-day and operated ten minutes afterwards. Sepsis was evidently established from this collection of pus, and while the probabilities are the patient will die from sepsis, I believe the cavity is shut off.

The question has been mentioned that not many operations were being done at present time for appendicitis in Great Britian: I have here a quotation from a recent issue of the *British Med. Journal*, the conclusions of G. H. Sanborn in regard to operative measures in appendicitis are:

1. That in all cases the physician is concerned only in the early recognition of the disease, the subsequent treatment to be left to the surgeon.

"2. That the catarrhal or mild form of appendicitis may be considered the only medical form of the disease; and delay in operating may be encouraged to a reasonable extent.

"3. All cases of appendicitis which, at the end of thirty-six hours from the beginning of the attack, show signs of increasing disease, should be operated upon.

"4. That the majority of so-called recoveries, treated medically are not recoveries in the full sense of the word, but simply a respite which enables one to

settle worldly affairs, and take out a life insurance policy, in anticipation of a fatal termination.

"5. The early surgical treatment of appendicitis enable us to avoid in every case uncertain results of a spontaneous cure, the danger of recurrent attacks, and the often fatal general peritonitis in apparently mild cases,—*Brit. Med.*

I would like to make a point in regard to the conservative treatment of appendicitis: The question has been asked as to how many members of this Society for anstance have treated cases of acute peritonitis in the young male; in most cases the question has been answered in the affirmative. Since the meeting at Dr. McDermott's one month ago, Dr. Cartledge and myself have taken occasion to look over the death certificates of the city of Louisville for the last twenty-three years and find 168 cases of acute peritonitis in the male, the age averaging twenty-eight years, and nearly every prominent physician in the city has his name affixed to one or more of these death certificates. We believe that at least seventy-five per cent of cases of acute peritonitis in the young male ean be attributed to the appendiceal region, as there are few other causes outside of traumatism that will cause peritonitis in this class of cases. We excluded in these statistics all cases at all doubtful; all cases of intussusception; all cases of obstruction of the bowels; all cases of volvulus; all cases where traumatizm was a factor, and it may be assumed too, I think, that a great many of the so-called obstruction of the bowels, volvulus, intussusception, etc. are caused by paresis due to inflammatory troubles in the right iliac fossa more than likely having their origin in the appendix.

Dr. L. S. McMurtry: (Visiting) There is very little I can say, as the subject has been so thoroughly discussed by the previous speakers. I am somewhat surprised that there should be any question about the gravity of the disease, or importance of surgical treatment. There can be no question about its being a very murderous disease, and I am surprised that my friend Dr. Cottell, considering the disclosures which have been made in regard to appendicitis within the last few years, still separates it into typhlitis, perityphlitis, etc. It has been demonstrated beyond question that practically all inflammatory conditions in the right iliac fossa are of appendicular origin. I believe that we can never settle any question in medicine or surgery by the recital of cases of doubtful diagnosis. We find fecal accumulations in the cæcum, non-inflammatory in character; we may have cases of catarrhal appendicitis, a large proportion of which go on to recovery; recurrence is common and ulceration and perforation may take place—in other words the case assumes a different phase of the disease and may result fatally without operation. The number of deaths from appendicitis is simply enormous at the present time. The Health Officer's Report for the City of Louisville at the end of every week will show five to six deaths from peritonitis; it is reasonable to suppose 2½ per cent. of these in males, and 1½ per cent. in females, are due to appendicitis. These facts in regard to the disease are recognized generally, and it seems to me after inspection of an appendix such as shown to-night, all question of the fatal and serious character of the disease would be placed forever at rest. To my mind the treatment of these cases is nothing but the application of a general surgical principle that is recognized in all other parts of the body; that is, when there is an abscess anywhere, to open and evacuate it.

Another feature about the surgical treatment of the disease is that we may have a large number of cases of appendicitis which apparently get well, and pass out of observation, and the disease will recur and ultimately require operation, in a large proportion of cases. In England, as has been mentioned by Dr. Vance, appendicitis is now universally regarded as a surgical disease, and all over this country professional opinion is very rapidly changing from the medical to the surgical side. There is one thing by which we are apt to be misled, that is the conclusions to be derived from very late operations; where the disease has gone on until septic peritonitis has spread; where there is a large accumulation of pus with a necrotic appendix and the patient has become thoroughly septic; there is nothing to be expected in such cases from any operation. Eleventh-hour operations are nearly all disastrous and are not a fair test of the operative treatment of any disease. The operative treatment of appendicitis is eminently satisfactory

when done early. In some cases very little surgery is required; in such as the one referred to by Dr. Larrabee it is only necessary to open the abscess, evacuate the pus, irrigate it and put in a drain. In many cases it is not advisable to carry out ideal surgery. However, I believe in every case where the patient's condition will permit, the appendix should be removed when it is the source of the tronble, just as we would remove a sequestrum of bone causing abscess in any other part of the body. There has been the greatest advance in the treatment of this disease. I believe it will not be a year until the subject can be discussed, and there will be no difference of opinion.

Dr. T. L. McDermott: I do not indorse what Dr. McMurtry has said, of course if I could, I would not have written the paper read before this Society some time since. To my mind the question of diagnosis of appendicitis remains the most important factor, and, until we arrive at a more satisfactory classification, we can never clear up the proper history of these cases. We should take the cases in which surgeons have been called early, operation advised and refused; then take the cases treated medically, and by comparing results with those in which operations have been performed, we may be able to reach a satisfactory conclusion. Cases are frequently reported where diagnosis had been made of appendicitis, and operation revealed a normal condition of the appendix, the trouble having been due to some lesion of the liver, kidney or other organs; the question then comes up, how can we arrive at an accurate diagnosis?

My own opinion is that the safest plan is to follow the conservative line of treatment in these cases until such time as some light is thrown upon the matter, as certainly the history of appendicitis is still a mystery, and we are largely at sea as to the diagnosis.

TREATMENT OF PERIPHERAL NEURITIS.

Leyden (*Berl. klin. Woch.*, No 20, 1894) discusses the treatment of multiple neuritis. He considers that in the case of neuritis following acute specific diseases, care during convalescence as to nourishment, rest in bed, and avoidance of overexertion contribute to prevent its occurrence. "Etiological treatment" (removal of the cause) in neuritis due to alcohol or lead, and treatment of the primary malady as in diabetes is of the first importance. There is no specific remedy for multiple neuritis and treatment by drugs does not play a very important part. Owing to the fact that rheumatism is not infrequently an element in the etiology, salicylate of sodium and other anti-rhenmatic drugs had been used without producing any good results in the majority of cases. Iodide of potassium was of use only now and then, and mercury was of doubtful value. Antipyrin, phenacetin, exalgin, euphorbia, and methylene blue were sometimes of use for the relief of pain, but it was often necessary to resort to morphine, chloral, sulphonal etc. Strychnine, formerely much used, but lately fallen into the background, deserved to be tried; by increasing the excitability of the affected muscles, it favored the return to normal function and nutrition; it ought especially to be resorted to in progressive cases in which the respiratory movements were threatened. Leyden prefers to use it as a subcutaneous injection, gr. $\frac{1}{75}$ to gr. $\frac{1}{50}$ twice daily. Massage and baths were valuable auxiliaries which were indicated, especially the latter, in the later stages of the disease. General hygienic treatment was of much importance. Rest—as a rule rest in bed—was of the first importance in the early stage; in the later stage, feeding. Finally, in the latest stages of all, moral suasion, rousing the patient's latent energies, was often of great value. Passive movements, and encouraging the patient to make active movements, were generally attended with better results than massage in this stage. Electricity, formerly used too much, was now used too little, but its usefulness was greatly limited by the fact that in many cases the pain caused was too great to permit the treatment to be continued.—*British Med. Jour.*

CURRENT LITERATURE REVIEWED.

IN CHARGE OF ELLISTON J. MORRIS, M. D., AND SAMUEL M. WILSON, M. D.

THE AMERICAN JOURNAL OF OBSTETRICS.

for August contains a paper by Dr. Thomas A. Ashby on

The Influence of Minor Forms of Ovarian and Tubal Disease in the Causation of Sterility.

As the result of his observations, the author draws the following conclusions:

First. The adjustment of the tube and ovary during ovulation is effected in the human female by the most delicate mechanical arrangement and may be defeated by trivial mechanical interferences.

Second. In animals that habitually have multiple pregnancies a more perfect mechanical provision is made for the reception of the ovum by the tube. The number of ova impregnated seem to bear a close relation to the perfection of the arrangement which is provided for their passage into the tube. Thus, in the bird will be found the most perfect type of mechanical adjustment, in the women the most intricate and difficult.

Third. The adjustment of the pavilion of the ovary may seem to be set aside by the most trivial vices of structure and disease, resulting in relative or absolute sterility.

Fourth. Sterility is due to minor diseases of tubes and ovaries to a greater extent than has been recognized. In an investigation of the etiology of this condition this fact should be considered in connection with an investigation of other causative influences.

Fifth. The highest aim of surgery is to restore and not to destroy function. In the treatment of minor forms of ovarian and tubal disease this fact should be borne in mind. Organs should not be sacrificed to the rule of expediency, but should be preserved in deference to a law of genuine conservatism.

J. C. Webster, B. A., M. D., F. R. C. P. E., contributes an article on

The Classification of Ectopic Gestation.

presenting the following table. Cornual pregnancy is not included in the table.

I. AMPULLAR, in which the gestation begins in the ampulla of the tube. This is by far the most common origin.

1. *Persistent.* In rare instances the tubal gestation may go on to full time.

2. *Rupture may take place early into the broad ligament*—supperitoneo-pelvic, tubo-ligamentous, extraperitoneal, broad-ligament gestation.

(a). The gestation may continue to develop —subperitoneo-abdominal.

(b). A secondary rupture of the subperitoneo-pelvic gestation may take place into the peritoneal cavity.

(c). The gestation may come to an end:

(a). By the formation of a hematoma

(b). By suppuration.

(c). By mummification, adipocere, or lithopedion formation.

3. *Rupture may take place into the peritoneal cavity.*

(a). Tubo-peritoneal gestation, in which the escape of the fetus in membranes occurs into peritoneal cavity, the placenta remaining in the tube, its development continuing.

(b). The gestation terminates in various ways: By the formation of a hematocele, the patient dying from the shock and loss of blood, or from peritonitis. In some cases absorption of the mass may occur. In others mummification, adipocere, or lithopedion formation may take place in the festus. Suppuration may result.

4. *The gestation may be destroyed:*

(a). By the formation of a tubal abortion and its passage through the fimbriated end of the tube into the peritoneal cavity.

(b). By the formation of a hematosalpinx.

(c). By the formation of a mole.

(d). By suppuration resulting in a pyosalpinx.

(e). By absorption after early death, by mummification, adipocere, or lithopedion formation.

II. INTERSTITIAL—The gestation may develop in the interstitial portion of the tube:

1. The gestation may go on to full time.

2. Rupture of the gestation into the peritoneal cavity may occur.

3. Rupture into the uterine cavity may occur.

4. Rupture both into the uterine and peritoneal cavities may occur.

5. Rupture may occur between the layers of the broad ligament.

6. After the death of the fetus it may remain in its sac, and possibly may undergo the same changes as in other forms—*e. g.*, Mummification, adipocere, or lithopedion.

III. INFUNDIBULAR—The gestation begins in the outer end of the tube or in an accessory tube ending. Under this heading are to be included the forms described as tubo-ovarian and tubo-abdominal, names which appear to the author to be unnecessary, since the gestation is a tubal one in origin, the end of the gestation sac merely becoming adherent to the abdominal wall, the ovary, or other of the viscera.

In an article on

Surgical Intervention in Tubercular Peritonitis,

Dr. O. S. Runnels says "It is still too early, the years are yet too few, in which to close the discussion or fix the verdict upon many of the claims for this procedure. But this is established beyond cavil: tubercular peritonitis is essentially a surgical disease and cannot be successfully managed without surgical intervention. It is settled that tubercular peritonitis, verified as such by microscopical proof, is curable by celiotomy, and that this remedy is of primary importance in the treatment of such cases. It is proven that the bacillus culture can be arrested if it has not

gone too far, and that the bacillus itself is a *post-hoc*, a follower, rather than a *propter-hoc*, and originator. In the light of present knowledge long-continued mystery concerning abdominal maladies is inexcusable. The exploratory incision is the indicated remedy in every such condition, and will enable the adviser to avail himself of the knowledge requisite for wisest procedure.

Dr. Eugene R. Corson in a paper entitled

A Suggestion in the Operation for Vesico-vaginal Fistula,

reports a case in which he undertook to close the opening after the flap splitting method advocated by Mr. Tait. Two attempts were failures and the author advises the young operator to stick to the old way. At the third attempt the author practiced the following device for drawing the parts within reach of the knife. He cut in half a small hollow rubber ball, such as is found in the toy shops, pierced the centre of this rubber disc with the small blade of a penknife, and passed through the slit made the shank of an ordinary shoe button, the shank appearing on the convex side of the disc. Through this was passed a strong silk ligature, strong enough to bear considerable traction. He then pared the disc down to a size permitting its passage through the fistula and giving him sufficient margin for traction. Curling it up, it was passed, with the aid of dressing forceps, into the bladder, where it expanded, enabling him on traction to draw the vaginal wall well down and within easy reach of any operative measure Through the counter pressure of the disc the paring of the edges of the fistula was greatly facilitated, especially in checking hemorhage. When all the sutures are placed they can be drawn aside and the disc drawn through the pared fistula. When the fistula is too small, and the operator is afraid of injuring the pared edges, the disc can be cut up by scissors and removed peicemeal by the dressing forceps. The author mentions the following points in the use of this device—Choose a rubber ball moderately thin, say the twelfth of an inch, so that the rubber disc may be readily curled up and passed into the bladder with the dressing forceps. Before curling it up draw the button well out an inch or more, that the button head be not in the way. On traction being made the shank immediately slips back into the slit made by the penknife. Make the sutures sufficiently long to permit of their being well drawn out into loops preparatory to removing the disc from the bladder.

Dr. Thomas C. Smith reports

Cases of Excessive Secretion of Milk,

in one of which the daily secretion amounted to half a gallon daily in addition to that required by the child. In the second instance the waste milk amounted to three pints. In regard to the treatment of such cases the author states that as the appearance of the menses causes a diminution in the supply of milk the advice had been given to bring on the menses. Uterine irritation is also recommended. Hot vaginal douches have also been employed, though strapping and bandaging the breasts seem to do more good than any other treatment. In the author's expealence, ergot has failed completely. The combination of opium and antipyrin seemed to have the desired effect in the author's first case, but was not resorted to till the affection had lasted nearly three months and while the author would use it in any future case he does not hazzard the asumption that it wrought a cure in the case reported.

Dr. G. Wythe Cook contributes an article on

The Treatment of Abortion.

The patient should be kept at absolute rest and such drugs employed as will conduce to nervous sedation and weaken muscular action until such time as the abortion becomes inevitable. When the abortion cannot be prevented the author is of the opinion that the uterus should be evacuated as speedily as possible. If there is any considerable hemorrhage the tampon should be used. This, according to the author, serves the double purpose of controlling the hemorrhage, and such blood as may escape is retained within the uterus and may dissect off the fetal appendages, in that way facilitating the emptying of the uterus. The best way to apply the tampon is to insert some iodoform gause into the cervical canal and then pack the vagina with long strips of aseptic gause.

If the entire ovum does not come away, the author unhesitatingly advocates the radical method of dealing with it by removal by manual means. He does so for these reasons: "So long as any portion of the membranes or placenta remains within the uterus, just so long is the woman menaced by the danger of hemorrhage or septicemia, or both; and there is no justification in allowing these foreign bodies to remain shut up within the uterine cavity because it has sometimes been done without any disasterous results. Hemorrhage may occur at any moment, or septicemia, by its insidious developments, may sap the strength and destroy the life or produce a condition of chronic invalidism that makes life a burden. Again an enlarged uterus containing a foreign body remains decidedly hypertrophied, and when finally evacuated its walls may remain permanently thickened and its cavity enlarged, these conditions favoring dislocations." The author adopts the plan of emptying the uterus with the fingers if possible, otherwise he sees no objection to the use of the curette. If the cervical canal has closed, a laminaria tent or other cervical dilator should be introduced. He states that more difficulty will be experienced in removing the secundines in an abortion procured by instrumental means than in a spontaneous miscarriage, because in the former case the tissues are more healthy and the placenta and membranes are more adherent. If the uterus has been thoroughly evacuated there will be little else to do, as the lochial discharge will be slight and uterine involution rapid.

The author also enters a little into the question of the duty of the physician to the State in abortion. While believing that it is the

duty of the physician to preserve inviolate any facts that he may have learned in his capacity as physician yet abortion is such a a crying evil that the author is in doubt as to the proper course to persue and evidently leans to the side of shielding the woman. When the patient dies as the result of a criminal abortion the author is of the opinion that the death certificate returned by the attendant should state the true cause of death. In case of the woman surviving he is not so sure of the course the attendant should take, on account of the apparant legal difficulties in legally establishing the facts.

The remaining papers in this issue are:

"Resuscitation, from Impending Death due to Concealed Hemorrhage, by the Infusion of of a Litre of Formal Salt Solution centrally into the Radical Artery." By Howard A. Kelly M. D.

"Hemorrhagic Infraction of the Fallopian Tube." By W. W. Russell, M. D.

"Five Cases of Pyosalpingitis." By A. Laptham Smith, M. D.

"A large Meningocele." By Frank T. Meriwether, M. D.

"Report of Cases of Mental Disease dependent on or coincident with Disease of the Generative Organs." By E. L. Tompkins, M. D.

In addition to the above, the journal also contains the report of the proceedings of the Eleventh International Medical Congress.

PERISCOPE.

IN CHARGE OF WM. E. PARKE, A.M., M. D.

MEDICINE.

Etiology of Craves's Disease.

Grube (*Neurol. Centralbl.*) maintains the infectious nature of Graves's disease. He narrates a rapidly fatal case in a woman, aged 50. Three of her four children had died; one of convulsions, two of "nervous fever." As a girl she was said to have been anæmic. Some years ago she began to suffer from nervous abdominal pains, and during the last half year she had had occasional asthmatic attacks, especially in the night. The patient herself attributed her illness to the shock caused by hearing that there was sugar in her urine (said to be about 9 per cent.) six weeks before her death. The asthmatic attacks became worse and a swelling appeared in her neck. The skin of her face appeared somewhat bronzed, as if by the sun. Exophthalmos was not much marked, but the signs of Stellwag and Grafe were both present. The thyroid gland showed hypertrophy of the left lobe and isthmus. Many enlarged lymphatic glands could be felt in the neck. The heart was much dilated, but the heart sounds clear; the pulse was full, strong, and frequent (120 to 130). There was considerable dyspnœa, especially at night, so that the patient could not lie down in bed; some rhonchus. A certain amount of œdema in the legs. Urine (specific gravity 1030) showed trace of albumen and sugar two weeks after the supposed commencement of the disease. Some tremor in the upper extremities. Slight fever in the evenings. She died in about six weeks from the supposed commencement. Granting the infectious nature of the disease, the infective agent may act (1) on the thyroid gland, causing perversion of its function, which Mobius has suggested as the cause of Graves's disease, the nervous system being affected secondarily; or (2) on the thyroid gland and the nervous system; or (3), and more probably, the infective agent or its products might act on the nervous system directly. Against the nervous theory of Graves's disease it has been urged that the symptoms do not point to one part only of the nervous system being affected; this is, however, no argument against the infectious theory, for several different parts of the nervous system could be affected by a toxin, though the medulla oblongata might be especially susceptible or its rich network of blood vessels might facilitate the working of the infectious agent. The causes which are commonly invoked as starting points for Graves's disease—shock, excitement, overexertion, etc.—can hardly be considered as of first moment, except in so far that they may weaken the body generally and render it less able to resist infection. Grube adds that he can further adduce as arguments in favor of the infectious theory of Graves's disease: (1) That the disease may supervene in cases of endemic or hereditary goitre; (2) the occurrence of swelling in lymph glands, noticed by Muller and in this case; and (3) that a hereditary character of Graves's disease has been recognized.

The Value of Sugar and the effect of Smoking on Muscular Work.

As the result of a series of experimental researches in the Physiological Institute, Turin, as to the value of sugar and the effect of smoking on muscular work, Vaughan Harley (*Journ. of Phys.*,) has come to the following conclusions: (1) The periods of digestion as well as the kinds of food taken have a marked influence on voluntary muscular energy. (2) Irrespective of the influence of food, there is a periodical diurnal rise and fall in the power of performing muscular work. (3) More work can be done after than before midday. (4) The minimum amount of muscular power is in the morning about 9 A. M., the maximum about 3 in the afternoon. (5) Regular muscular exercise not only increases the size and power of the muscles, but has the effect of markedly delaying the approach of fatigue. (5) The amount of work performed on a diet of sugar alone is almost equal to that obtained

on a full diet, fatigue, however, setting in sooner. (7) In fastening, large quantities of sugar (500 g.) can increase the power of doing muscular work during 30 voluntary contractions from 26 to 33 per cent, while the total gain in a day's work may be 61 to 76 per cent., the time before fatigue sets in being also lengthened. (8) The effect of sugar is so great that, when added to a small meal, it can increase the muscular power during 30 voluntary contractions from 9 to 12 per cent., while the total increase in work may be from 6 to 39 per cent., the approach of fatigue being at the same time retarded. (9) When added to a large mixed meal, sugar can increase the muscular power of 30 contractions 2 to 7 per cent., the increase in total work being 8 to 16 per cent, and a marked increase in the resistance to fatigue is shown. (10) Two hundred and fifty grammes of sugar taken in addition to a full diet increases the day's work; the work accomplished during 30 voluntary muscular contractions shows a gain of from 6 to 28 per cent., the total day's work giving an increase of power 9 to 36 per cent., and the time before fatigue sets in being lengthened. (11) Moderate smoking, although it may have a slight influence in diminishing the power of doing voluntary muscular work, neither stops the morning rise nor, when done early in the evening, hinders the evening fall. (12) Sugar taken early in the evening is capable of obliterating the diurnal fall in muscular power that occurs at this time, and increases the resistance to fatigue.

Gonorrhœal Stomatitis and Ophthalmia in Newborn Child.

Leyden, of Breslau (*Centralbl. f. Gynak.*,) writes that a single girl, aged 20, was recently delivered, a little before term, of her first child. There had been moderate vaginal discharge during the last months of pregnancy; on that account the vaginia was freely washed out with lysol during the entire puerperium, so that the discharge steadily disappeared. The labour was normal. The child (a girl) was rather weakly. Directly the head was delivered the eyes were washed with a 1 in 7,000 solution of sublimate. Until the evening of the sixth day the child seemed fairly well; it took the breast, the motions were normal, and the eyelids did not stick together; but the skin became jaundiced, and on the morning of the seventh day there were all the signs of gonorrhœal ophthalmia in the right eye. A large pustule was found on the mucous membrane of the upper lip, close to the gum. The pus which it contained was found full of gonococci. Notwithstanding all precautions (the case was in the Breslau Lying-in Hospital) the left eye was attacked on the next day. The purulent inflammation of the mouth increased, and there was diarrhœa. The eyes, however, were saved, and after frequent washing of the buccal mucous membrane with the 1 in 7,000 sublimate lotion, the purulent crusts which had formed disappeared, and nine days after the first appearance of the pustule a desquamating area marked the seat of disease. The mother's nipples did not become sore; the child, however, was fed with the bottle directly the soreness of the lip was detected.

Intravenous Injections of Corrosive Sublimate.

At the meeting of the Eleventh International Medical Congress, in Rome, Guido Bacelli (*Berliner Klin. Wochenschrift*, said that intravenous injections had been suggested by him and employed for the cure of malaria. Professor Nothnagel maintains that they are unnecessary, as subcutaneous injections can accomplish just as much without disagreeable consequences. But Bacelli's results, published in 1890, were brilliantly successful as regards the treatment of severe forms of malaria with intravenous injections of neutral salts of quinine, and they contradict Nothnagel's opinion. Since then Bacelli has experimented with corrosive sublimate given by intravenous injections for syphilis. Experiments upon animals were tried first. He then tried the new method in two cases of cerebral syphilis which had resisted cure by other methods, including inunction and hypodermic injections of mercury and iodide of potassium in large doses. The results were excellent. Other cases followed, so that now the method is employed by many Italian physicians. The solution Bacelli employs is as follows:

℞

Hydrarg. bichlor.	1 part
Sodii chlor	3 parts
Aq. dest	1000 parts

The skin is cleansed and rendered aseptic, and a syringeful of the solution is injected into a vein at the elbow, back of the hand, or thigh. The veins are first made prominent by constriction. The injection must be into the lumen of the vein, otherwise pain and swelling will result. In a few minutes (five to six) mercury is excreted in the saliva. The "cure" begins with the injection of 1 milligramme of corrosive sublimate daily,—that is to say, 1 cubic centimetre of the solution (1 to 1000; then the quantity increases from 2 to 8 milligrammes (the maximum dose). For four milligrammes a two-per-cent. sublimate solution may be employed, so as to avoid the injection of too large a quantity of fluid. In exceptional cases he begins the treatment with doses of 4 to 5 milligrammes.

Bacelli calls special attention to the following points: 1. The small quantity required. 2. The possibility of overcoming many symptoms quickly,—symptoms which indicate direct blood-poisoning with the syphilitic virus. 3. The benefit and widely-distributed action upon vessel walls which are the specially-favored seat of syphilitic alterations.

Bacelli also employs sublimate injections for the cure of echinococcus cysts. The cyst is punctured and about thirty cubic centimetres of the fluid withdrawn through a trocar; 20 cubic centimetres of one-per-mille sublimate solution are then injected, the trocar withdrawn, and a dressing applied. In five days the patient is dismissed cured. The parasite is killed, and the subjective and objective symptoms subside by degrees.—*Therapeutic Gazette.*

Treatment of Typhoid Fever by Carbolic Acid and Chloroform.

The author has, in treating typhoid fever, resorted to the simultaneous use of carbolic acid and chloroform, each of which, employed by itself, has already yielded good results in dothinenteritis. He employs the following formula:

Carbolic Aid (pure)	2.4	gme. (37 grn.).
Spirit Chloroform	.8	" (2½ fl. drs.).
Tincture Cardamom	12	" (3 ")
Syrup	60	" (1⅛ fl. oz.).
Saturated Chloroform-water	275	" (9 ").

Two tablespoonfuls in a little ice-water every two hours.

The patient takes, on the first day, two tablespoonfuls of this potion five times in the course of the twenty-four hours; he repeats the same dose seven times on the next day, and ten times from the third day on, until a marked fall of temperature with a corresponding improvement of the general condition has set in. This result having once been obtained, the daily dose is gradually diminished to six tablespoonfuls and continued for at least a week after the temperature has become normal.

This mode of treatment is said to shorten the duration of the affection, to remove complications, and to rapidly suppress intestinal tympanites, diarrhœa, fœtor of the stools, delirium, and coma; also to promote the assimilation of food and to hasten convalescence.

Carbolic acid, as administered in the above mentioned doses, is said to have always been well tolerated; and the urine hardly ever became darker, and never assumed a blackish color.—*American Medical Surg. Magazine.*

Turpentine in Carcinoma.

John Clay.—(*Medical Press und Circular and New Albany Medical Herald.*)—The author reports five cures of grave carcinoma by means of Chian turpentine. Such favorable results cannot be obtained when the disease has progressed so far as to invade the general system; but even then an improvement can be effected so far as concerns pain and hemorrhage, so that turpentine must be regarded as a palliative agent of the greatest value in carcinoma. Besides the five cases mentioned above the author has treated, during the last nine years, a number of patients with uterine carcinoma with Chian turpentine, who are still alive and present every appearance of health. When it becomes necessary to operate for carcinoma of the mammæ, it is a good plan, according to the author, to administer turpentine for three weeks before the operation, in order to destroy the germs, which constitute the cancerous infiltration of the surrounding tissues, and after the operation the medicine should be kept up for a year, in order to prevent a return. The author has used this method for the last six years in many cases, and has never seen a return. In the treatment of carcinoma, opium and morphine should be almost entirely dispensed with, since their prolonged use in increasing doses contributes materially to produce the cachexia and anemia. On the other hand, Chian turpentine in connection with antipyrine acts as a palliative and has no bad after-effect.

As regards the mode of administration, the author prefers the pills to the mixture, but they are not to be used in cases of cancer of the stomach or rectum, as they are not digested. The pills are to be mashed or broken up and taken in milk, to the number of nine to twelve in twenty-four hours. In conclusion, the author warns patients and physicians that patience is necessary in carrying out this treatment, since three weeks and longer may pass before any sign of improvement is visible.—*N. Y. Therapeutic Review.*

Laudanum in the Treatment of Diphtheria.

It is well known that, in children affected with diphtheria, the dyspnœa and inspiratory spasms visibly increase under the influence of fright and restlessness, whilst they diminish when the little sufferer quiets down. This fact suggested to Dr. C. Stern, of Dusseldorf, (*Medical Week*) the idea of administering opium in the form of laudanum, to children affected with diphtheria, in the hope of thus exerting a favorable influence on the respiratory disturbances due to the laryngeal stenosis. The results obtained by this treatment seem to be worthy of note, inasmuch as Mr. Stern was frequently enabled by this means to avoid tracheotomy in cases in which this appeared before administration of the laudanum to be the only resource.

He gives the little patients, according to their age and the intensity of the respiratory difficulties, from two to five drops of vinum opii, repeating this dose several times when necessary. In the case of children over a year old, he generally begins by administering three drops of laudanum in a teaspoonful of sweetened water. If the effect of this dose is not sufficiently marked, he gives in half an hour two drops more of laudanum. This second dose is said to frequently determine a notable diminution in the cyanosis and drawn conditions of the features. As soon as the respiratory disturbances appear again to be on the increase, another dose of the remedy is given. In this manner, laudanum may be administered for several days in succession at the rate of from three to five drops daily, with careful watching of the child both with reference to the narcotic effects of the drug and the possible need of tracheotomy, although the laudanum treatment in the majority of cases permits of dispensing with this operation.

This treatment is said to be particularly efficacious, when instituted early, especially from the very onset of the respiratory disturbances. Lastly, in cases in which tracheotomy eventually becomes unavoidable, the laudanum treatment makes it at least possible to delay the intervention without inconvenience, which is of considerable importance when the patient has to be transported to a hospital to undergo the operation.—*N. A. Practitioner.*

SURGERY.

Gunshot Wounds of the Intestine.

DEDUCTIONS.

1. Laparotomy is the only rational procedure in all cases of gunshot wounds of the abdomen where there is reasonable evidence that the ball has entered the abdominal cavity, and each moment's delay will materially lessen the chances of recovery.

2. If there is a reasonable doubt as to whether or not the ball has entered the abdominal cavity, give the patient the benefit of that doubt by doing an early exploratory operation for diagnostic purposes.

3. In wounds of the pancreas complicating gunshot injuries of the intestine, a resection of this gland may be done, care being taken not to include the head or common duct, as death invariably follows such procedure.

4. The segmented catgut rubber ring being uneffected by the imbibition of intestinal secretion, is one of the very best aids in circular enterrhaphy or lateral anastomosis.

5. A ring composed wholly of catgut is entirely worthless as an intra-intestinal support on account of its highly absorbable qualities.

6. When the Lembert stitch includes only the serous, or a part of the muscular coat they do not as a rule, ulcerate their way into the bowel as is claimed by some, but usually become encysted, and remain near their place of introduction.

7. An intestinal wound when properly treated usually becomes securely sealed in from six to twelve hours by the formation of plastic peritoneal exudation; but this must not be too confidently relied upon as it may be very materially retarded.

8. If there arises evidences of a supurative peritonitis, do a second abdominal resection, disinfect the cavity and apply drainage. M. L. Hefeelfinger, M. D., in *Texas Curier-Record.*

—o—

Aromatic sulphuric acid was Sydenham's favorite remedy in bleeding at the nose or in spitting blood. Ten to twenty drops three or four times a day.

The Occurrence of Hemorrhage After Operation for the Removal of Adenoid Tissue from the Naso-Pharyngeal Vault; with the Report of a Fatal Case.

The case reported by Dr. J. E. Newcomb (*American Journal of the Medical Sciences*), is that of an anæmic, somewhat strumous boy, nearly four years of age. There was no evidence of hæmatophilia. The operation was done with the usual precautions. Gradle's forceps and Gottstein's curette were employed. Soon after the child got home an oozing hemorrhage began. The *physician*, however, was not *sent for* until *twelve hours later*, when the child was found in a desperate condition from loss of blood. *Death followed shortly.* Of eleven cases of hemorrhage (reported by Rousseau, four) occurred in the first decade of life, five in the second. The youngest age recorded is four years (Delavau), the oldest is twenty-eight (Ruault.) The time after the operation when bleeding began varied from immediately to twenty hours. Tamponning was the favorite measure of relief employed. Patients from whom adenoid tissue if removed ought to be kept under careful observation for at least twenty-four hours.—*International Medical Magazine.*

Abscess.

Never try fluctuation across a limb, always along it. Never forget that: (1) Abscesses near a large joint often communicate with the joint. (2) Abscesses near a large artery sometimes communicate with the artery. (3) Abdominal wall abscesses sometimes communicate with the gut or the solid viscera.

Never forget that early openings are imperative in abscesses situated: (1) In the neighborhood of joints. (2) In the abdominal wall. (3) In the neck, under the deep fascia. (4) In the palm of the hand. (5) Beneath periosteum. (6) About the rectum, prostate and urethra.

To wait for abscesses to "point" or to "burst" in these situations is culpable as well as cowardly.

Remember the frequency with which hematomata and traumatic aneurism have been mistaken for abscesses, and incised with untoward results.

Do not open an abscess anywhere near a large artery without first using a stethoscope, and then only by Hilton's method (*i. e.*, scalpel, dressing forceps).

Never, under any circumstances, use for exploratory puncture "that surgical abomination—a grooved needle"—for it will allow contamination of all the tissues through which it brings the fluids. (Thornton.)

Never plunge in opening abscesses; never squeeze the sac after doing so.

Do not forget that your incision should radiate: (1) In abscesses pointing near the nipple. (2) In abscesses near the anus. (3) In scarifying the chemosis of the cornea.

And that your incision should be longitudinal: (1) In the hand. (2) In the urethra. (3)On the vertex.

Do not forget that incisions for abscesses in neck and face should run parallel with the wrinkles and folds.

Do not be afraid of hurting the lacteal tubes in mammary abscess. More harm is done to the gland by the enlargement of the walls of the abscess than by a free incision.

Never make a palmar incision except in the middle of the lower third and in the axial line of the fingers or at the sides of the palm.

Do not forget, in opening a deep abscess in the lumbar region without the projection of the abscess, to cut down opposite a transverse process, not between them, for fear of wounding a lumbar artery.—*Atlanta Med. and Surg. Journal.*

Night-Sweets of Phthisis.

℞

Sulphate of atropine	0.0005	grm
Sulphate of zinc	0.12	grm
Gallic acid	0 12	grm
Creasote	10.0	gtt

M. et div. in pil. no v.
Sig.: One pill thrice daily.

—*Med. World.*

GYNECOLOGY.

The Early Treatment of Carcinoma Uteri.

The large number of hopeless cancer cases applying to me for relief have induced me for the past three years to adopt certain stringent rules with regard to my own patients, which I have taught for the same period in my lectures at the Johns Hopkins Hospital.

The end in view is two fold—first, by treating cervices liable to become cancerous, and thus prevent the formation of this neoplasm; and, secondly, to detect cancer of the cervix at a sufficiently early date to successfully eradicate the disease.

(1) It is the duty of the obstetrician to see each patient at his office from two to three months after her confinement, and there to examine and make a careful record of the condition of the pelvic structures, stating accurately what lesions have been produced by the confinement.

(2) Cervical lacerations should be certainly described, noting the position and depth of the tear and the appearance of the lips. Lacerations require no treatment when the lips are thin, uninfiltrated, and lie together. Thick, infiltrated, and everted lips associated with cervical catarrh call for depletory treatment followed by repair of the laceration.

(3) Every woman who has passed thirty-five years of age and has borne a child should have this examination made without delay by a competent physician, and if the cervical lips do not appear perfectly sound she should be kept under observation and examined at intervals of from six to eight months.

(4) Every woman over thirty-five, with a cervical tear, should be examined at least once a year for ten years, or longer, if the appearance of the lacerated area is not perfectly healthy.

(5) These rules apply with special force to patients whose family history shows a marked inclination to cancerous diseases.

If these rules are conscientiously observed, there is not a shadow of doubt but that thousands of lives would be saved in this country alone by timely interference with a disease so markedly local and accessible in its origin.

I feel that while we are searching for a cure for cancer, the line of progress in the immediate future for the gynecologist is clearly in the direction of prophylaxis and anticipation, either preventing or discovering the malady in its earliest stages.—*New York Medical Journal.*

New Uses for Guaiacol.

Diabetes.—Dr. Clemens, of Frankfurt-on-the-Main, reports favorable results in this disease from the administration of pure guaiacol, in the daily dose of from 18 to 30 drops, given in three doses, suspended in milk or codliver-oil. The patients were allowed to drink beer, and were upon a nitrogenous or mixed diet. At the end of eight days there was a notable diminution of sugar. After four weeks of treatment the patients were able to partake of some saccharine foods without increased glycosuria being produced. The salutary effect upon the polyuria was still more pronounced. At the end of several days of treatment the amount of urine passed in twenty-four hours had often diminished by one-half. The general condition was improved The drug was well borne.—*La Med. Moderne.*

ARMY AND NAVY.

CHANGES IN THE U. S. ARMY FROM AUGUST 5, 1894, to AUGUST 28, 1894.

A board of Medical Officers to consist of
Major Valery Havard, Surgeon,
Major John Van R. Hoff, Surgeon,
Major George A. Torney, Surgeon,
is by direction of the Secretary of War, appointed to meet at West Point, N. Y., August 15, 1894, or as soon thereafter as practicable, for the physical examination, of the cadets of the 1st and 3rd Classes; the cadets of the 2nd Class on their return from furlough and such other cadets of the Military Academy and candidates for admission thereto as may be ordered before it.

Leave of absence for one month, to take effect about August 5, 1894, is granted Captain W. Fitzhugh Carter, Assistant Surgeon.

Captain Wm. J. Wakeman, assistant surgeon U. S. Army granted one months leave absence, on completion of his duties at Fort Thomas, Rifle Range, Ky.

Leave of absence for one month to take effect upon the completion of his present duty at the Fort Thomas Rifle Range, is hereby granted to Captain William J. Wakeman, Assistant Surgeon.

Major Curtis E. Price, Surgeon, upon the expiration of his present leave of absence, is ordered to Fort Supply, Oklahoma Terry, for duty at that station, relieving Captain Wm. H. Corbusier, Assistant Surgeon. Captain Corbusier on being relieved by Major Price, is ordered to New York City, N. Y. for duty as Attending Surgeon and Examiner of Recruits, relieving Captian Wm. C. Shannon, Assistant Surgeon. Captain Shannan on being thus relieved, will report in person to Col. C. H. Alden, Assistant Surgeon General, president examining board, for examination for promotion.

Captain Edgar A. Mearns, Assistant Surgeon, will be relieved from duty with the commission appointed for the location and marking of the boundary between Mexico and the United States and ordered to Fort Myer, Va. for duty relieving Captain John L. Phillips, Assistant Surgeon. Captain Phillips on being thus relieved, is ordered to Fort McKinney, Wyo. for duty at that post relieving Captain George E. Bushnell, Assistant Surgeon. Captain Bushnell on being thus relieved ordered to Davids Island, N Y., for duty relieving Captain Samuel Q. Robinson, Assistant Surgeon. Captain Robinson, on being thus relieved, ordered to Philadelphia, Pa. for duty as Attending Surgeon and Examiner of Recruits.

NEWS AND MISCELLANY.

Program of the Nineteenth Annual Meeting of the American Academy of Medicine "Waumbek" Jefferson, N. H., August 29 and 30, 1894.—The Profession is Cordially Invited to Attend.

OFFICERS.

President: George M. Gould, Philadelphia.
Vice-presidents: C. C. Bombaugh, Baltimore; J. McFadden Gaston, Atlanta; S. W. French, Milwaukee; C. W. Foster, Woodford, Me.
Secretary and Treasurer: Charles McIntire, Easton, Pa.
Assistant Secretary: Edgar Moore Green, Easton, Pa.
Council: The Officers Ex-officio, and Traill Green, Easton, Pa.; Henry O. Marcy Boston; Benjamin Lee, Philadelphia; Albert L. Gihon, U. S. N.; R. Stansbury Sutton, Pittsburg; Frederic H. Gerrish, Portland, Me.; Leartus Connor, Detroit; Samuel J. Jones, Chicago; Theophilus Parvin, Philadelphia; P. S. Conner, Cincinnati; Justin E. Emerson, Detroit; Bayard Holmes, Chicago; W. T. Smith, Hanover, N.H.

Wednesday August 29th,—The program is arranged for the day, a recess will be taken, upon motion for dinner; and should there not be time, the papers not read will be read on Thursday before the papers assigned for that day.

Ten a. m. business meeting. Open only to the Fellows of the Academy.
Reading of the minutes of the last annual meeting.
Report of the council.
Election of Fellows.
Appointment of a Committee on Nomination.
Treasurer's report.
New business.
Eleven a. m. (Or at the conclusion of the business meeting.) Open session for reading of papers.

Topic for discussion: "Some Problems Pertaining to the Medico Social Relations of the Dependents, Defectives and Delinquents."

I. Preliminary—1. "Charity Organization."—The president's address, George M. Gould, Philadelphia.
2. "The Retrogressives, what Produces them; Classification," Bayard Holmes, Chicago.
3. "The Importance of the Study of this Subject to the Profession," Charles McIntire; Easton, Pa.

II. The Dependents—4. "The Relation of Food Adulterations to the Dependent Classes," Henry Leffmann, Philadelphia.
5. "The Provident Dispensary in England." H. Webster Jones, London.

III. The Defectives—6. "The Blind," J. A. Spalding, Portland, Me.
7. "Assistance and Care for the Blind," Charles A. Oliver, Philadelphia.
8. "Prevention of Blindness," Benjamin Lee, Philadelphia.
9. "The Present Status of Legislation for the Prevention of Blindness from Infantile Ophthalmia," Lucien Howe, Buffalo.
10. "What agencies Conspire to Check Development in the Minds of Children," J. Madison Taylor, Philadelphia.
11. "Prevention of Insanity," Gershom H. Hill, Independence, Ia.
12. Senile Dementia and Testimentary Capacity," J. N. Whittaker, Cincinnati.
13. The Medical Service of the United States Pension Bureau," P. S. Conner, Cincinnati.

IV. The Dilinquents—14. "Physical training as a Reformative Agent," Helen C. Putnam, Providence, R. I.

RECESS.

Wednesday evening, 8.20—The "Reunion Session." Under the direction of the Committee of Arrangements.

Thursday, August 30th.—10 a. m. business meeting. Open only to the Fellows of the Academy.
Unfinished business.
Reports of committees.
New business.
At the conclusion of the business session the reading of papers will be resumed.

V. Miscellaneous— 1. "The Evolution of Surgery," George D. Hopkins, Brooklyn.
2. "Government Commission Instead of State License," J. D. Kelly, Providence, R. I.
3 "Report of the Committee on the Comparative Value of Academic Degrees.
4. The Qualification of a Physician," J. M. Myer, Danville, Ky.
5. "The Work of our Academy," Robert Lowery Sibbet, Carlisle, Pa.
6. "And to Every Man His Work," Frederic H. Gerrish, Portland, Me.

Installation of the president-elect.
Appointment of additional member of council.
Unfinished Business.
Adjournment.

MEMORANDA.

In order to permit a full discussion of the topics presented, the authors of papers have been requested to limit their reading to twenty minutes, regulating details to foot notes or appendices; in order to have an interesting discussion, the committee on program will move that the time of each speaker be limited to five minutes.

There will be a meeting of the Council at the "Waumbek" on Tuesday evening August 28th, at which time the applications for membership will be examined in order that they may be reported to the Academy. It will facilitate their labors if the applications are sent in early to the secretary.

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ORIGINAL ARTICLES.

POLARITY IN RELATION TO CATALYSIS AND VITAL ACTION.

J. F. PEAVY, M. D., POLLARD, ALA.

In an article in the REPORTER of July 7th, 1894, I have endeavored to present a theory as to the physiological functions of coloring matters and ferments. In that article the attempt was made to show that these substances are concerned to an eminent degree in the transformations of matter and transmutations of force effected by organic forms. The theory that their action hinges upon a capacity for polarization, while not receiving definite statement was distinctly implied. To further develop the idea of polarity in relation so catalysis and vital action is the object of the present contribution. My apology for offering it is my strong conviction that it will prove a key to some of the problems which confront the investigator in the region of chemico-physiologic research; questions of great interest to every wide-awake and progressive physician.

The terms *magnetized*, *polarized*, *nascent* when used with reference to atomic or molecular states, express the same condition. It is a condition of *heightened* activity, of *accentuation* of existing affinities. It represents a definite expenditure of force and is capable of evolving a definite amount of force. This state established, determining conditions decide what the resultant action shall be. If the proper conditions be present, the force propagates itself as electric currents. If answering chemical bonds are within reach of the excited affinities, chemical union results. Should the conditions for conduction or chemical action be wanting, static electrical conditions are established.

Let the condition be induced in a substance susceptible of a distinct bipolar excitation, as the magnetic metal iron, and a magnet is formed. If the iron has been previously hardened into steel and its molecules thus rendered less movable, the magnet, formed with greater difficulty by a greater expenditure of force, will be permanent. A permanent magnet is an aggregation of molecular magnets having a fixed axial relation to each other. It is itself a static condition of force, arrested motion, yet it embodies a capacity to take up mechanical motion and convert it into other modes of force. This capacity has been turned to immense practical account in the magneto-electric machines of late years. The capacity to transmute mechanical motion into electro-chemical force is possessed by each molecule of a magnetic substance in a condition of excitation. The aggregation of molecules simply aggregates the force.

The forces electricity and magnetism are directly and distinctly correlated. They have the same basis in a condition of molecular polarization. They are inseparably associated though acting in lines perpendicular to each other. To excite a molecule electrically is to excite it mag-

netically in a direction transverse to the line of electrical excitation. To magnetize a molecule in a given direction is to electrize it in a transverse direction.

Catalytic agents are said to act by their *mere presence.* This, of course, to a logical mind, is a luminous absurdity. Mere presence is a very negative property, yet these agents effect very positive results. They effect definite transformations of matter and transmutations of force. How do they act? By virtue of a capacity for polarization, they appropriate force and expend it in producing chemical decompositions and recompositions. The force is represented in the *condition* of polarization, and is transmitted by inducing a corresponding condition in the atoms of substances upon which it is expended. It expresses itself in repulsions between atoms in analytic processes, and in attractions and unions between atoms in synthetic processes. The force appropriated may be mechanical motion, acting through its molecular expression, heat, or those modes of motion known as light and electricity, in processes which involve a *consumption* and *storage* of energy; or, on the other hand, it may be chemical affinity in processes which involve a liberation of force as heat or motion. The principle of the conservation of energy is in no sense contradicted, since it is affirmed in no case that force originates *ad initio* but is always *derived* and always *transmitted.*

It is not intended, however, to set forth the contention that *all* the force concerned in every chemical action brought about through the polarizing action of a catalytic agent, is derived through that agent. This is probably true of all those actions which involve a *storage* of force. In the separation by chlorophyl of the atoms of O and C in the compound CO_2, and of O and H in H_2O where fully satisfied affinities are divorced, this is unquestionably true. In this case *all* the force that could be developed by the recombination of these atoms has been derived through chlorophyl from the sunlight.

In *force-evolving* actions brought about by catalysis, the force set free may be vastly in excess of that employed in producing the polarization, the excitement of affinities which initiates the actions. The polarization itself, however, represents a definite expenditure of force which reappears in the resultant action. Nevertheless, in every polarized atom there is besides the accentuation of affinity, a residuum of force-evolving capacity inherent in its nature, pertaining to its atomic *weight.* Even this may be regarded as an *induced* condition by introducing a consideration speculative, to be sure, yet reasonable. "The periodic law" of Mendelejeff affirms that the properties of the elements are functions of their atomic weights. In the light of this law and the principle of the conservation of energy, may it not be that the generic differences of the elementary forms of matter as expressed in their atomic weights, represent the effects of the operation of forces which have differentiated them from a single primary form; and that the sensible expressions of force, the dynamic states of matter, are evolved from a tendency to fall to a common level, to approach a common condition of static equilibrium.

The chemical actions of organic life involve either a storage of energy or an evolution of energy. In the ascending series of actions, force is stored in compounds formed through the action of polarity in chlorophyl, and certain other chemical bodies, called ferments, concerned in constructive metabolism. In the descending series of actions this force is released through the action of a complementary set of bodies which introduce oxygen and tear down the compounds built up through the action of the former. No organism can be built up or torn down without the action of some of these agents.

In the article referred to in the beginning of this paper, I ventured to regard the coloring-matters, chlorophyl and hæmoglobin, as well as the coloring of bile, as catalytic agents. It appears to me that they are *distinctively* catalytic agents, and on account of their relations to life, possess a peculiar importance. Through the operation of polarity in chlorophyl, materials are drawn from inorganic nature, out of which organic forms are built and forces are appropriated which are ultimately transmuted into vital action.

The *modus agendi* of chlorophyl presents itself to my mind as a distinct mechanical process, analogous to that of the magneto-electric dynamo. In this machine, rotary motion being communicated to magnets, there is developed in bodies having proper relation to them, a condi-

tion of polar excitement. The proper means of conduction being provided, this force is conveyed away as electric currents. Chlorophyl contains the metal iron which, placed near the middle of the electro-chemical series, possesses both acid and basic affinities and a peculiar capacity for bipolar accentuation, being hence distinctively magnetic.

The most refrangible rays of the sunlight, the violet and ultra-violet, the actinic rays, are employed in producing and maintaining a condition of magnetization and its correlate, electro-chemical excitation, in the iron of chlorophyl. The least refrangible rays, the red and ultra-red, the dynamic rays, are employed in conveying motion to the atoms or particles of magnetized iron. Thus are developed and maintained what are essentially rotating magnets. Through their action the vibratory motion of sunlight is absorbed, appropriated and converted into electro-chemical force, a dynamic force changed to a chemical action.

To bring our facts and theoretic conceptions concerning the action of haemoglobin into logical relationship, a different mental picture becomes necessary. Here chemical conditions and chemical actions are developed into dynamic expressions. In the lungs, the alkalinity of the blood is highest from the exhalation of carbonic acid, and the iron of hæmoglobin is in the condition of electro-positive accentuation. In this condition it seizes with avidity upon oxygen, which is electro-negative. In the capillaries of the various organs and tissues of the body, the alkalinity of the blood is lowest from the absorption of carbonic acid.

Here the iron of haemoglobin becomes electro-negative and throws off its oxygen. This oxygen, liberated in the nascent condition, unites with oxidizable substances present and generates *heat* and *motion*.

The atoms of C and H liberated from CO_2 and H_2O through the action of chlorophyl, represent the force used in separating them from their compounds at its highest degree of *tension*. They embody the capacity of evolving the *whole* of the solar energy they represent. This may occur directly in the process of combustion as a high expression of dynamic action or more slowly in the oxidations of animal and vegetable life.

In the high-tension, violent, uncontrolled action of combustion, *direct* affinities operate, but in the low-tension, even, *regulated* oxidations expressed in vital action, the presence and activity of these substances, coloring matters and ferments, which I have ventured to consider as intermediary bodies, become necessary. Fatty matters, to be sure, represent a condition of partial oxidation with lowered tension, yet of all the hydro-carbonaceous material utilized by animals they approach most nearly the condition of pure hydrocarbons and possess the highest capacity of heat production. It may be also that their oxidation constitutes an exception to the above statement, since, reduced to a finely divided "molecular" condition, they may be *directly* oxidized, especially in the lungs where the oxygen supply is abundant. This may constitute a special provision for heat production at this point, since heat is rapidly lost here in producing the difference in temperature between inspired and expired air, and also absorbed by the expansion of gaseous bodies which pass out with the expired air.

The carbohydrates, starch and sugars, those substances which exhibit so beautifully the marvels of magni-crystallic action, also display most strikingly the operation of polar agencies in animal and vegetable processes. Starch, $C_6 H_{10} O_5$, the first easily demonstrable product of the recompositions which follow upon the dynamolytic action of chlorophyl, may be regarded as the storage form of carbohydrate material. Under this form it is stored in the stems, cavities, seeds, tubers, etc., of vegetables, and in the liver of animals, for future use. In order to become available, it must be converted into the more soluble forms of dextrine and sugar. This transformation is effected by diastase and its congeners, the other diastatic ferments. To initiate these actions a certain degree of *heat* is necessary, which acts by inducing in the ferment a condition of accentuated affinity for water, the presence of which is also necessary that these actions may go on. The water is transferred to the material undergoing change and effects its hydration with evolution of heat. The heat may reach quite a high degree, as when large quantities of malting grain are contained in vats. In the germination of seed in a normal way, the heat evolved is no doubt in part applied to the constructive needs of the springing life.

The conversion of starch into sugar, while it confers a distinct gain in crystalline quality, solubility and diffusibility, involves a loss of heat and consequent lowering of tension. The lowering of tension is, however, for the purposes of life a distinct gain, since it confers a greater facility for being controlled or regulated in its heat evolving function. The control of the body temperature, the regulation of the heat producing, distributing and dissipating functions, so as to maintain a uniform normal, is one of the most remarkable powers of the animal organism.

The appropiation and transferrance of H_2O by diastase in accomplishing its function, presents us an analogy to the assumption and conveyance of O by hæmoglobin. May not also the difference between the so-called *latent* and *active* conditions of diastase bear an analogy to the difference between reduced hæmoglobin and oxyhæmoglobin?

The coloring matter of bile has imposed upon it a double work. It acts as a carrier both of water and of oxygen. During the period of digestion and absorption, while glucose is being deposited in the liver as glycogen, and peptones undergoing conversion into blood albumen, the bilirubin newly extracted from dead blood cells, appropriates water from the former and oxygen from the latter, to be yielded up in the oxidations and hydrations going on in the alimentary canal. During the intervals of digestion, the coloring of bile absorbed from the intestine in the condition of bilirubin, is converted in the portal vein into biliverdin, and upon reentering the liver yields up its water to convert glycogen to glucose, and its oxygen to complete the oxidation of certain nitrogenous bodies into urea.

The difference between the two conditions of the coloring matter of bile is not strictly a molecule of water and an atom of oxygen, H_2O+O, but a molecule of peroxide of hydrogen, H_2O_2. The same bond that links the H_2O and O to the coloring matter, links them to each other, and is broken at both points at the same instant. Bilirubrin cannot appropriate water unless oxygen be present, nor can it appropriate oxygen save water be present. To hold the one it must have the other.

Although the processes we have been considering are expressions of cell activity, cell life, it does not follow that any new force is originated by the cells themselves. Cells, like all aggregations of matter endowed with life, exercise *directive agency* over forces already existing. They select, combine, *direct* matter and forces drawn from the common stock in nature.

It may be objected that the agents of the destructive transformation, fermentation and putrefaction, which take place in dead organic material are organisms, and that the changes they effect are dependent upon their nutritive actions.

It will readily be admitted they are organisms, yet the fact remains that they are exceedingly simple in structure and the transformations they effect, while incidental to the nutrition and growth of the cells, are in themselves simple chemical reaction over which they exercise *directive agency*. They are able to disturb the balance of chemical attractions in the compounds which they tear down, only when supplied with a moderate degree of heat which acts no doubt by polarizing, that is, by increasing the chemical activity of their nitrogenous constituent.

It is a fact worthy of note that all the catalytic agents, so-called, concerned in organic actions contain the negative element nitrogen. May it be that this element, weak in its own attractions, unstable, fond of change, taking part in the most active phenomena of life as well as the most violent reactions of inorganic chemistry, facilitates the intra-molecular changes necessary to the discharge of their functions by serving as a centre or hinge about which the atoms may move and change their groupings without the molecule itself going to pieces?

Anesthetics in Labor.

Dr. M. M. Latta, in *North American Practitioner*, says: For many years I have given in all midwifery cases a mixture composed of chloroform, one pound; nit. of amyl, one drachm; mixed and well shaken it is ready for use. I found it especially useful in cases of weak heart as indicated by purple lips sighing respiration, and feeling of impending trouble. I generally precede its use by an opiate, in the manner and form that seems indicated.

THE MEDICINAL TREATMENT OF GRANULAR CONJUNCTIVITIS.*

CHARLES ZIMMERMANN, M.D., MILWAUKEE, WIS.

I have been asked by our chairman to read a paper on the medical treatment of granular conjunctivitis. This, however, is a very difficult task, especially in answer to the question, which is the best treatment of granulated lids.

Perhaps in no other eye disease have so many remedies or plans of treatment been designed as in the one under consideration. This fact alone would throw a critical light on the matter, according to the law, "the more numerous the remedies, the less curable a disease." But we get even a much more unpromising view if, looking over the galaxy of methods and procedures from the onset of historical ophthalmology up to our present times, we come to the conclusion that we have turned in a circle and are now with our end at the starting point of our medical ancestors of more than 2,000 years ago. For what else is it than the same principle when they used verdigris and we sublimate, or when Hippocrates scraped the conjunctiva in order to remove the granulations, practicing ophthalmoxysis, and we do the same thing but call it *brossage* or *grattage* of the lids? Nevertheless the subject is very important considering the devastation caused by trachoma, especially in the countries of its predilection. And a man who could entirely cure trachoma would do a greater service to humanity by that than by operating on cataracts.

The definition of granular conjunctivitis in the use of many not being very sharp, comprises collectively also much lighter forms of inflammation of the conjunctiva. Accordingly the reports of curing trachoma must be taken very cautiously. However, it cannot be denied that almost anybody who has had occasion to treat the disease, has met with good results by different kinds of treatment. If we consider the time not too short to form an opinion, it seems that a judicious revival of the old mechanical methods, combined with proper medicinal treatment, marks progress, especially in regard to the speediness of a cure. It is impossible to here review all the substances which have been tried with more or less success, and it will suffice to mention only a few which have been lately devised and have come into more general use, or have deserved more interest.

In 1882, de Wecker reported very favorably the action of jequirity on trachoma. I witnessed the cases treated by Prof. Knapp in 1883 and 1884 (*Arch. of Ophth.* XIII., 1 and 2), while assistant at his clinic. Three per cent. infusions were repeatedly brushed over the everted lids, three times a day and oftener, and if these did not act, five per cent. infusions were used. The consequence was swelling of the lids, increased congestion, and muco-purulent discharge. In some cases, however, it amounted to a development of a severe diphtheritic conjunctivitis, followed by pyorrhœa and more or less destruction of the cornea. The conclusions were (*l. c.*): that jequirity cures trachoma more quickly, but less safely than other remedies. Its action is highly beneficial in most cases, but neither uniform nor always controllable. Knapp recommended a restriction to cases of old, intractable pannus with advanced cicatrization of the conjunctiva which cannot furnish nutritive material enough for either an infiltration into the depth of the conjunctiva or for an abundant purulent secretion. Some (Coppez, Murrell), still use the infusion. Cheatham (*Ophth. Rec.*, 91) powders it on the conjunctiva in cases of severe trachoma with pannus, making from three to six applications. He watches the patient very closely during the jequirity inflammation. C. Michel (*Arch. of Ophth.* XXI., No. 3) recommends it again, if used carefully.

At a meeting of the Heidelberg Ophthalmological Society, 1891, (*Bericht*, 1891,) von Hippel published his experience, gained on over 300 cases of trachoma, with the method of the Doctors Keinig of Soest, which consists in rubbing the conjunctiva with pledgets of cotton dipped in sublimate solution, 1:2,000, after instillation of cocaine. (In the Transactions of the Wisconsin State Medical Society, of 1891,

* Read at the Wisconsin State Medical Society, May 2, 1894.

p. 117, I recommended it myself after some trials.) This rubbing has to be done gently when the conjunctiva is swollen and loose, in order not to cause ulceration. If the follicles are hard and the mucous membrane anemic, it has to be executed more forcibly so that the contents of the follicles may be expressed. The reaction is not very severe. Generally the conjunctiva swells and, the next day, shows a greyish coating which comes off easily. The follicles disappear gradually, without shrinking of the conjunctiva. There is a marked improvement of the corneal infiltrations and superficial ulcers which were produced by the trachomatous process, but not so, when associated with intense hyperemia and iritis. After the subsidence of the follicles the remaining conjunctivitis ought to be treated with astringents. Not in all cases was a lasting recovery attained. Relapses occurred in 15 per cent., which however ceased after renewed treatment. This procedure may be warmly recommended for severe cases with diffuse lymphoid infiltration of the conjunctiva. Its value seems to lie in the fact that the mechanical effect is enhanced by the use of sublimate. Bærenstein explains it thus: by the pressure, the follicles are destroyed and absorbed, and the sublimate abolishes the microbic agent of trachoma. Therefore it is applied with good success after the different operations of Sattler, Darier and others. Michel uses it with vaseline, with which he practices massage. Rosmini applies sublimate solution 1:2,000, or weaker, with an irrigator to the affected mucous membrane for 30-60 seconds; semi-biniodide of mercury in the same way. Pedrazzoli uses sublimate in a spray. Falta constructed a special forceps, with which, as cotton holder, the massage with sublimate can be done more thoroughly on all parts and recesses of the conjunctiva. Trousseau found pumice stone soaked with sublimate solution very effectual, and Stephenson touched the lid with a stick composed of one part sublimate and five parts chloride of potassium.

Massage has been used quite extensively with the following powders: boric acid, tannic acid, alum, iodoform, antipyrine; or with ointments of yellow oxide of mercury, iodide of potassium, creolin, resorcin, iodoform, or naphthol in combination with vaseline or crude kerosene oil. Solutions of pyoctanin, creolin, carbolic acid, naphthol, some in permanent irrigation, have been recommended. Blue mercurial ointment has been rubbed on the skin of the lids.

Another method is the subconjunctival injection of iodine solution or other solutions. Schnabel does not treat the granulations at all, only the accompanying inflammation by the constant application of icebags, and afterwards he uses caustics. The destruction of the follicles by actual and potential cauteries, as well as by electrolysis, belongs rather to the surgical department.

If we compare the different remedies in regard to their efficiency, sublimate seems to hold the principal place.

Nevertheless it is quite interesting to see how the various authors and inventors of new applications, in case of failure, or for after treatment, returned to the caustic and astringent methods with nitrate of silver and sulphate of copper, which have been so long in vogue. Only a long time of careful observation will decide the real value of a remedy, since many of them will only act so long as they are fashionable. Medicinal treatment of trachoma cannot be done away with entirely, but the operative treatment will predominate.

Erysipelas Toxines for Sarcoma.

Coley (*Am. Jour. of the Med. Sciences*) reports upon the results obtained by injections of the toxines produced in cultures of the streptococcus of erysipelas in twenty-five cases. Six he regards as cured, one still remaining under treatment, the others having remained well from three months to almost three years after the cessation of treatment.

He concludes: The curative action of erysipelas upon malignant tumors is an established fact. This action is much more powerful in sarcoma than in carcinoma. This action is chiefly due to the toxines of the erysipelas streptococcus, which may be isolated and used with safety. This action is greatly increased by the addition of the toxines of the bacillus prodigiosus. The toxines to be of value should come from virulent cultures and should be freshly prepared. The results obtained from the use of toxines without danger are so nearly or quite equal to those obtained from an attack of erysipelas, that inoculation should rarely be resorted to.—*Polyclinic.*

THE COLD PACK AS AN ANTIPYRETIC.

J. R. CASE, M. D., WORCESTER, PA.

I wish to call attention to a remedy that is as old as our noble profession, having been used by Hippocrates himself; a remedy that has lately claimed the attention of the profession and deservedly, as it is at once a safe, simple and very efficient means of reducing the abnormal temperature of the body. It is the most distinctive of hydropathic appliances, and may thus be described:

Have a blanket spread upon a bed or crib, as the case may be, and then wring a sheet out of cold water, say at a temperature of 60° F. In the case of a child the sheet should be folded several times, and for the adult use two sheets. Spread the sheet over the blanket and upon it lay the patient, and fold sheet and blanket quickly over him. Then apply comforts or blankets tightly around the patient to exclude all air. The heat of the body acting on this damp linen almost immediately generates vapor, and the patient is very soon in a warm vapor bath.

The effects upon the body of a febrile patient must be very plain. It is a simple philosophical process in which the heat of the body is transferred to the cold water in the sheet by simple conduction. At the same time that the temperature is thus being reduced, the pores of the skin are being thoroughly cleansed and thereby better fitted to perform their important functions. The equalizing thus of the temperature over the entire body, equalizes the distribution of the blood through the system, thereby relieving congestions whenever occurring—as experience amply testifies. Lastly it slows the heart beats, reduces the arterial tension, allays nervous irritability, reduces the respiratory movements and produces a feeling of well-being in the patient. I have seen cases that could not be quieted by any ordinary means, fall into a peaceful slumber almost immediately after being put in a cold pack.

Its advantages over internal antipyretics are many, as must be apparent to even a casual observer. It can be quickly applied and as quickly removed, the effects being under our complete control, for as soon as the temperature is within bounds we withdraw the remedy and the effects cease. It is also available in cases where it is utterly impossible to use internal medication, as I hope to show subsequently. It is safer because it depurates the blood instead of disintegrating it, as do many if not all of the coal-tar derivatives when used in efficient doses, as is evidenced by the accumulation of waste products in the blood, notably CO_2.

We know that pyrexia produces a hæmolysis and rapid transformation of the latent or potential energy, which becomes manifest as heat. Therefore, to conserve this energy, we must reduce this temperature quickly, safely and pleasantly. In the cold pack we have a remedy that fulfills all the requirements, then why should we resort to internal antipyretics of the limits of whose destructive, or deleterious action we know little. I do not wish to relegate modern antipyretics to oblivion, for I think they have a very useful field, which, however, is limited. Experience has taught me that their prolonged use is dangerous and very unsatisfactory, and I think they should be replaced by the cold pack in all cases of prolonged pyrexia.

Dr. G. N. Davis, (*Med. Age.*), declares antipyretic drugs are of value only as nerve sedatives. He declares cold the best of all remedies for the reduction of temperature. With the latter statement I thoroughly agree; with the former I cannot fully concur.

I have had recourse to the cold pack in upwards of fifty cases during the past two years, all of which were desperate ones, all other means having been exhausted before I was permitted to use the pack.

Fully 90 per cent. of the cases recovered, and I do not think that 20 per cent. could have done so without the pack.

The more fully to illustrate my views and substantiate the philosophical basis of the treatment, I will cite a few cases as they occurred in practice.

CASE I. I was called, Feb., '93, to see E. A., a child aged 5 years. I found him in a tetanic spasm; respiration 12 per

*Read before the Montgomery County Medical Society, July 11, 1894.

minute; jerky and irregular pulse almost imperceptible; temperature in axilla 104°; eyes turned up and patient *in extremis*. I used the cold pack, and in half an hour the child was breathing easily; pulse 160, temperature 101°; still some twitchings. I repeated the pack for fifteen minutes longer, when the temperature was 99.5°. and the patient was sleeping quietly. The pack was again used in four hours, and the temperature was easily controlled with small doses of phenacetine. Diagnosis *Meningitis*. I gave him Tinct. Digitalis, and Fluid Ext. Ergotæ, alternating with phenacein. After having his bowels acted upon, I had continuous cold applied to the head

At the end of a week he was convalescing. His left side and particularly his left arm was partially paralyzed, as was also his speech.

CASE II. Walter G., child aged 7 months, was taken sick in July, 1893, with a severe attack of iliocolitis, from which he recovered with the usual treatment, but was very weak and emaciated. In about a week after this attack he was taken with intermittent fever, which continued for two weeks. I prescribed quinine by mouth and rectum, but in spite of everything the temperature would run up to 104° or 105°, and the child was approaching an extreme condition. So much so, that I thought he could not recover. I used the cold pack whenever the temperature ran above 101°.5, and the child became restless, with the effect to reduce temperature and quiet the child; he usually passing into a quiet slumber. He was unable to raise his head for one week after the subsidence of the fever. His pulse had been very feeble, and his surfaces withered; generally he had a chill about 5 A. M., when he was blue and his hands cold, friends thinking he was dying until they became accustomed to seeing him in that condition. He made an uninterrupted recovery under tonic treatment.

CASE III. I was called May 5, 1894, to see Walter G., aged 2 years, 8 months, and found him with high fever, temperature, 104°.5; stupid. I saw him in the evening and he had complained all the afternoon. I looked upon the case as one of malarial intoxication and prescribed quinine suppositories and small doses of phenacetine, and expected to find him better in the morning. I saw him again at 11.30, May 6th, when he was in a spasm and unconscious, his parents thinking he was dying. His pupils were dilated, pulse 90, respiration 60, temperature in axilla, 107°.4. The case seemed hopeless. However, I used the cold pack, using water at a temperature of 56°, and had it renewed every 15 minutes. In half an hour the temperature had fallen to 104°, respiration 48, and spasm relaxed. I then left the patient, but ordered pack changed every 15 minutes until seen again, which was in two hours. Then his temperature was 99°.5; pulse irregular and intermitting 160; respiration 36; hands and feet cold. I ordered him wrapped in blankets and bottles filled with hot water applied to the feet.

℞ Nitro-glycerine..... gtt.ij.
Digitalis..... gtt.ss.

Sig: Every hour for three doses, and then every two hours until seen.

Gave quinine suppositories of 10 gr. each. The child was now conscious and asked for some food when milk was given and he drank of it. The temperature ran up to 103° at 6 P. M., when the pack was again used, and he rested well all night. 6 A. M. of May 7th, the pack was used again. The pack was changed three times at intervals of 15 minutes. The temperature had been 102°.9 (previous to which he had a chill) reduced in three-quarter hour to 99°.5.

On May 8th, the temperature was 99°; resp. 24; pulse 120, regular. May 10th, temperature ran up to 104°.5 at 1.30 A. M., pack was used, and at 3.30 A. M. temperature was 101°.5; at 5 A. M. temperature was 103°.9, pack used. Temperature 102°.5 at 7 A. M. At 9 A. M. 100°.9. At 12 M., 99.5°, pulse 116. From this time on he made an uninterrupted recovery.

I have used the pack with the most gratifying results in pneumonias of children when there seems to be an inevitable dissolution.

I trust I have said enough to bring the treatment before you in a way that may cause you to at least consider it a valuable therapeutic means if you have not already done so.

DR. BOUCHARD says that a simple and easily applied means of recognizing in a certain and indubitable manner the presence of death is by noting the temperature found in the armpit. If it descends below 68° F., it is a positive sign of death.

COMMUNICATIONS.

EARLY DIAGNOSIS OF CANCER OF THE UTERUS.*

EDWIN RICKETTS, M. D., CINCINNATI, OHIO.

It is not my intention to ask you to consider the latest discovery of a startling nature in pathology by "trotting out" another little beast of a formible appearance, at least on the miscroscopical slide, with a personal desire that it might be added to the already extensive "Bacteriological Menagerie." Instead I bring for your consideration an old subject, trusting that the discussion may be fruitful in causing not a few earliest possible diagnoses, which I take to be the greatest and formost step in doing an operation, that when done early promises more than does a late operation.

Cancer of the uterus is abroad in the land, and every member of this society has had these cases referred to him by the attending physician, with both patient and physician desirous of as much comfort as possible by the prolongation of life, if a cure cannot be hoped for.

We have cases reported of early diagnosis of cancer of the breast, followed by prompt extirpation of the gland, with nonrecurrence even after five, ten, or more years. Why are we not to expect better results for as early an extirpation of the cancerous uterine globe, in which the disease is known to develop more slowly than in any other portion of the body?

We, as operators with some cause for complaint, say to the general practitioner, who sees these patients previous to consulting us, that we do not see them early enough to offer a procedure that promises the most in the way of relief, if not a cure; while the general practitioner has the best of the argument when he asks justly for more light—that is, how is he to see these cases earlier, and when once seen how is he to be able to make the earliest diagnosis?

1. Let him impress upon the minds of every adult married female that may consult him that cancer of the uterus is more liable to make its appearance between thirty-five and fifty years of age.

2. That a leucorrhæ followed by a watery discharge, that soon becomes red, and in time offensive, staining the linen a dirty, yellowish-red, are symptoms demanding prompt consultation with the family physician as soon as the first-named makes its appearance.

3. That he may have at his commaud three common and yet all-important aids. viz., those of sight, smell and touch. With these special senses properly educated, he seldom need be at a loss to make the required earley diagnosis. Such a practitioner will not make a hurried, casual examination through unloosed skirt-bands and attempts to excuse himself by telling the patient that she is "having her change of life," and will be all right soon.

With prompt action on the part of the patient and physician, operators can offer a cure in a number of cases by means of the vaginal or the combined hysterectomy, with a desired prolongation of life in the remainder.

The physician possessing a normal nose, one index finger, one middle finger, one or two eyes, is peculiarly fortunate as to expense, for they cost not a thing. True, they do not glisten so brightly, nor possibly do they impresel the laity so profoundly, as the attractive recently imported microscope that is so kaledioscopic, even in the hands of our trans-Atlantic myopic brethren, who are giving special attention to pathology as seen through the microscope. The operator should not attempt the work of the pathologist in connection with his work, nor should he be microscopist to himself.

For convenience we will divide the uterus into three sections.

1. The neck—that portion protruding from the upper end of the vaginal tube and into it, and which stands almost erect.

2. The attached—that tissued partition that separates the vagiual tube from the abdominal cavity.

3. The fundus—that portion of the uterus that lies within the lower portion of the abdominal cavity, save being covered by peritoneum.

Early cancer of the uterine neck can be felt and seen without dilatation of the uterine canal, in part or entire, and it can

* Read before the Obstetrical Society of Cincinnati, 1894.

be seen and felt near the beginning of the leucorrheal discharge; while cancer beginning in the attached or fundal portion is not recognized until the leucorrhea and watery discharge is accompanied by the smelling discharge, unless the uterine cavity has been dilated as soon as a suspicious discharge begins.

Cancer beginning in the cervix spreads more rapidly to the attached and fundal portion; beginning in the attached or fundal portion it spreads to the neck; this latter form is longer amenable to treatment.

In multiparous cervices cancer is more easily recognized, while trauma is credited as the main exciting cause. In the non-multiparous uterus, in which cancer begins at the attached or fundal portion, we can not consider trauma as the main cause. With the earliest possible diagnosis of cancer, be it situated in the neck, attached or fundal, or be it found in all three localities at the same time, pregnancy should not be entertained by the primary or secondary uterine possessor nor by the physician. Under such circumstances it becomes a highly offending member, just as much so as a cancerous eye, an osteo-sarcoma or a malignant mammary gland.

Cancer is a new growth, and in time breaks down; there is never any attempt at repair of the invaded tissue; it goes from bad to worse. There is a highly reddened condition of the tissue surrounding the growth, while the growth and surrounding tissue are tender and in a short time bleed easily when the probe, speculum or finger comes in contact with the same. The growth and surrounding tissue are engorged with blood, and when breaking down takes place depletion helps to reduce the size of the parts. The same is true with cancer located and breaking down in the attached or fundal portion.

Do what you may in internal medication with local application of remedies, the loss of tissue as the result of cancer is never to be replaced by healthy tissue. In the very early stage the membrane covering the suspicious growth is smooth, while beneath it and through it the sense of touch alone will reveal the character of the nodule that soon, if the uterus is allowed to remain, is to prove so serious. In the early stage of the developing nodule the membrane covering the same is of a pink-white color, while that covering the surrounding tissue is somewhat of a deeper red; pressure of any kind gives pain.

Cancer located on the neck may look and feel like hard or soft nodules, or granular erosions may surround the os externum, but it differs with cancer, as it has a soft edge, while the mucous membrane has high points scattered and gradually sloping around within the soft border; it bleeds easily, but does not slough, and with no treatment soon shows signs of repair.

The walls of a cancer nodule on the verge of breaking down are formidable, while its middle is depressed and the body catacomed, the result of sloughing.

In a follicular cervix the needle or bistoury will differentiate by a puncture of the follicles; you can rub any scarlet patch without causing the same to bleed.

Be the cancer located in the neck, attached or fundal portion, the first and second cardinal symptoms, those of leucorrhea followed by watery discharge, are present. Later, as the result of breaking down, the characteristic odor makes its appearance; with such a change of symptoms present, not complicated by a non-malignant polyp, cancer should be promptly diagnosed.

So soon as a leucorrheal discharge, with or without cancer of the cervix being made, followed by a watery discharge, with the first detectable odor that is not the result of non malignant polypus, vaginal hysterectomy, with or without the combined method, is the only procedure to be considered.

With a cancerous deposit in whicb the characteristic bloody, watery, bad-smelling discharge has existed from three to six months as a result of the breaking down cancerous tissue, nothing can be promised in a cure, but much can be promised in comfort to the patient, with possible prolongation of life, especially in cases where cancer begins in the attached or fundal portion of the uterus.

In the diagnosis of this disease, the microscopic aids have been disappointing —even misleading; if, under the present delayed early diagnosis of the uterus, as a result of depending too much and too long upon the microscope, we are to make our escape, it is to by intelligently *feeling* and *seeing* early, along with the earliest possible detection by *smell*.

TRANSLATIONS.†

TRACHEAL FISTULÆ.

In *Le Bulletin Medical* for July 1, 1894, Kirmisson reports the case of a young man 16 years of age while suffering with croup submitted to the operation of tracheotomy and was cured of his laryngeal disease. Since then he had been compelled to wear constantly his canula. As a result the boy prevented that rare condition a tracheal fistula. Kirmisson removed the canula and found that the boy was able to breathe without it without any difficulty; the external orifice of the fistula commenced to close, and 15 days after the removal of the canula when the boy was shown to the class a deep depression was found at the middle portion of the neck. At the center of this excavation was a small orifice irregularly ovoid, preventing a vertical diameter of 7 to 8 millimeters and a transverse diameter of 5 millimeters. Through this orifice could be seen the mucous membrane of the posterior wall of the trachea presenting a very pronounced reddish tint. The air passed freely through their orifice but on closing it resperation was not impeded through the natural channel.

This condition following tracheotomy is very rare. This is not, however, the only variety found. Fistulæ exist due to traumatism, particularly to knife-cuts in attempted suicide. In this case, the solution of continuity is situated high up; there is also found a laryngeal wound, and consecutive to this a laryngeal fistula. Military surgeons have described lesions of the same kind consecutive to gun-shot wounds, the ball producing a veritable loss of substance of the anterior wall of the trachea. In another class of patients we find tracheal fistulæ consecutive to suppuration of the larynx engendered by laryngeal tuberculosis or syphilis. After opening of the abscess, there is often discharge of the necrosed cartilage, the orifice does not tend to close, and instead under the influence of a prolonged suppuration its edges organize gradually and a laryngo-tracheal fistula is thus produced. The reason that fistulæ are rare after tracheotomy is due to the fact that the canula is as a rule not permitted to remain long enough to result in this complication. The conditions that necessitate a prolonged retention of the canula, are in the first place, paralysis of the vocal bands consecutive to diphtheria and opposing the passage of the air through the normal passages. Alongside of this cause, which is not very frequent, we find another which has been noted by a large number of surgeons, viz:—the production of fleshy polyp-like growths, at times quite voluminous, which form in the trachea and which, drawn in during inspiration, resist the passage of air. These are most common at the upper angle of the tracheal wound and on the posterior wall of the trachea at the point where the canula exercises a true permanent traumatic action. A third cause presenting the removal of the canula, and this is undoubtedly the most frequent cause, is the chronicity of the affection for which the tracheotomy has been practised. There exists thus a true obliteration of the larynx, as in certain cases of tuberculosis or syphilis of the larynx.

It may then be seen that tracheal fistula can exist in two different conditions. Either the larynx is free and it is the only lesion which should engage the surgeon, or else the fistula coincide with grave lesions of the larynx and trachea, and principally with a stenosis; in this case the situation of the disease is quite another. The *symptoms* of tracheal fistula are not numerous or important. There is generally in the median line of the neck a deep depression, a sort of infundibulum at the base of which a small orifice leads into the trachea. The skin is invaginated and becomes continuous with the tracheal mucous membrane. The dimensions of the fistula are generally small.

The operative procedures for the cure of tracheal fistulæ are numerous enough to permit of a classification as follows: 1. These processes of autoplasty in which there is dissected and used a flap of tissue in the vicinity of the fistula. 2. These processes in which there is simple employment of the skin without previous cutting of the flap.

These different operative procedures have all succeeded in some cases and failed in others. Kirmisson prefers the metho of Berger and Lehart.

† Translated for THE MEDICAL AND SURGICAL REPORTER, by the translators W. A. N. Dorland, M. D.

THERAPEUTICAL SUGGESTIONS FROM FOREIGN JOURNALS.*

THYROIDINE IN MALIGNANT PRECOCIOUS SYPHILIS AND OBESITY.

Dr. J. D. Menzies (*La Semaine Médicale*, No. 43, 1894,) of the English Navy, has had occasion to treat several cases of malignant precocious syphilis, an affection which is particularly frequent amongst the Hindoos. The patients were cachetic, bearers of squamous, ulcerating and osseous lesions where the mercurials and iodides had been administered, in vain. The dry extract of the thyroid glands of sheep was given, in the form of tablets, 25 to 50 cgms. per diem, while all specific midication was suspended. In all these cases he obtained a more or less considerable amelioration of the local as well as of the general condition. The cutaneous and osseous lesions healed, at least partly, and the pigmentations following the skin lesions disappeared as well.

Another English physician, Dr. N. Yorke-Davies, of London, has discovered these same tablets to be a precious addition to the treatment of obesity. Thus in patients placed under both an appropriate diet and treated with thyroidine the decrease in weight was from two to three times greater by dieting alone.

TREATMENT OF INCIPIENT CONSUMPTION.

Prof. Potain (*La Rivista Clinica è Terapeutica*, No. 6, 1894,) speaks highly of the iodides in incipient pulmonary consumption, and especially in the following formula:

℞

Chloride Sodium	20	o (ʒv.)
Bromide Sodium	5	o (ʒjss.)
Iodide Sodium	2	o (grs. xxx.)
Water	200	o (ʒvjss.)

A teaspoonful two to three times a day in milk. If chronic catarrhal symptoms predominate, turpentine and tar preparations together with creasote may be found serviceable ; these will be harmful if the suggestion be intense. It is wrong to regard creasote as a specific in tuberculosis. The sulphurous mineral waters are also useful though these are rather appropriate to cases with gastric catarrh, without much tendency to congestion. The general nutrition deserves attention with especial predominence of fatty foods. Cod-liver oil is hence here indicated, though if not tolerated, milk and butter may replace it. For the night sweats the phosphate of lime, in large doses, especially of the insoluble preparations, is valuable; excellent results follow the administration of the neutral phosphate in doses of four, six or eight grains a day. The diathetic conditions should also be combatted. In syphilis, specific treatment; in arthritism, the salicylate of soda—in short, the indications will differ according to a diligent study of the symptoms of each case.

CALOMEL AND TRAUMATICINE IN SYPHILIS.

Dr. F. Cauchard (*La Semaine Mèdicale*, No. 43, 1894,) has recently tried a mixture of traumaticine with 25 per cent. of calomel in the treatment of syphilis. The patient after a bath has his eruptions, especially the more extensive ones, or, instead, the whole back be painted with this preparation. After evaporation of the chloroform—traumaticine consists of a solution of ten parts of gutta percha in ninety of chloroform—there remains a coating of varnish which is closely adherent to the skin. This is renewed three times a week, until the secondary manifestations have disappeared. After its use the secondary eruptions have been observed to disappear, in twenty to thirty days; it is especially in papular, pustular and squamous syphilides that it has been found valuable. This method has the advantage of enabling one to combine general with local treatment. It would seem particularly indicated in weakly subjects who cannot tolerate the internal use of mercury as well as in children with hereditary syphilis and in the management of late cutaneous manifestations.

CHLORIDE OF ZINC IN OTITIS MEDIA CRANULOSA.

Drs. Rottel and Montalescot (*Wiener Medizinische Presse*, No. 27, 1894.) recommend highly the chloride of zinc in suppurating inflammation of the middle ear, with granulations. Morning and evening the patient is to inject into the ear a syringeful of the following solution:

℞

Chloral	3	o (grs. xlv)
Borax	4	o (ʒj)
Destilled Water	1000	o (ʒxv).

This solution is both antiseptic and anodyne. Three to four times a week the

*In charge of the Translator, F. H. Pritchard, A. M., M. D.

granulating points are cauterized with a solution consisting of one gram of the chloride of zinc to thirty grams of water. A small tuft of cotton is wrapped around the tip of a probe and dipped into the solution is introduced into the tympanic cavity through an ear speculum. The sensation of resistance felt by the operator will show that the tampon has reached the wall of the cavity. The probe is then carefully turned around in order to touch all the diseased mucous membrane. The first cauterization will cause slight hemorrhage which will yeild to injections of warm water. The chloride causes a destruction of the granulations and a fibrous alteration of the mucous membrane and the remains of the tympanic membrane; a cure may be expected in three to four months, a relatively short time for such an obstinate disease. In cases where the granulations reach out into the meatus they may be removed with the curette or the cold snare and the bleeding surface cauterized with a 10 per cent. solution of the chloride and then the described method carried out. Treatment by this preparation of zinc is exclusively indicated in the granulating form of middle ear inflammation; it is contraindicated in the simple, hypertrophic and ulcerating forms.

TREATMENT OF HEMORRHAGE FROM THE BLADDER.

Dr. Poussond (*Wiener Medizinische Presse*, No. 29, 1894) offers several useful hints in the management of this symptom. He does not think that rest is indicated in all cases. If from a stone it is of course necessary, as the dorsal position often alone suffices to cause hemorrhage to cease; in other cases this position may favor congestion. As to drugs he recommends poultices containing opium to the region of the bladder, opium and belladonna internally, especially morpine subcutaneously to reduce the vesical irritability. Intra-vesical injections he would have entirely left alone as they cause coagulation and increase irritation. If they be required from urgency of the moment they should be given after evacuation of the bladder and those drugs favoring coagulation avoided. The choice of a styptic is not immaterial. Ergot causes contraction of the bladder and irritates the muscle fibres; matico, gallic acid and the preparation of alum containing iron, are preferable. In congestive hemorrhages of prostatic affections he much favors matico in infusion, in a daily dose of thirty grams. In profuse hemorrhages he employs gallic acid, in the following formula:

℞

Gallic Acid.....	1.0-1	5 (grs.xv-xxij.)
Syrup Opium		
Syrup Bitter Orange Peel āā	30	o (℥j.)
Distilled Water.....	60	o (℥ij.)

A teaspoonful every hour.

The ferric alum may be employed instead of gallic acid and in the same dose. Both of these remedies are powerful hemostatics and are only to be used after other means have failed.

A HOMEMADE MEAT POWDER.

Dr. W. R. Huggard (*Muenchener Med. Wochenschrift*, No. 25, 1894) gives a convenient method of preparing a powder from meat to be used on a nutrient. Lean meat is cut into small pieces; these are dipped for a few minutes into hot lard until the surface is browned, then taken out and allowed to drain on a sieve. They are then cut into fine pieces and dried in an oven for twenty-four hours with a slow fire. The meat thereby becomes dry and brittle and is easily ground in an ordinary coffee mill. By this process of roasting it has lost four-fifths of its weight. This meat powder has a very agreeable taste and a fine aroma. It may be administered in the most different ways as in hot water, as a tea, mixed with mashed potato, on bread and butter as a sandwich, with or without the addition of pepsin. It is very easily digested, tolerated by the most delicate stomach, and it may be kept, if dry and excluded from the air, for a long time.

LOCAL ANESTHESIA BY INJECTION OF COLD FLUIDS.

Dr. Létang (*Bulletin Médical*, No. 48, 1894) recommends subcutaneous injection of cold fluids for the production of local anesthesia. To reduce whatever fluid that may be used to the proper degree of cold he advises a mixture, by weight, of eight parts of sodium sulphate and seven parts of hydrochloric acid. A test tube c

taining a solution of common salt, (0.5-1 per cent.,) is placed in this fluid. If the temperature of the freezing mixture has sunken to 10°c, that of the salt water will be found to be 0°c. The syringe is filled with this and the injection made which causes neither pain nor induration at the place of injection, but a complete and long lasting anesthesia. Instead of this salt solution any other may be used which will reduce the temperature to o°c. He recommends the following as the best:

℞ Sterile Distilled Water
Pure Glycerine, āā..... 100 | o (℥ij ʒj.)
Ether..... 2 | o (gtts. xxx).

This mixture is easily kept, and may be employed even to ten injections at a time of ten grams each. It is quite sufficient for the requirements of ordinary practice. In a number of minor operations where cocaine is usually employed in extraction of teeth, removing of ingrowing toenail, amputation of fingers and toes, this method gave good results. Also in the treatment of obstinate neuralgias, of the trigeninus, intercostal and sciatic nerves the injections were successfully made into the region or the substance of the nerve.

GLYCEROPHOSPHATE OF POTASH IN NERVOUS DISEASES.

Prof. Jolly (*Muenchener Med. Wochenschrift* No. 25, 1894,) has employed the glycerophosphate for the last ten years in the treatment of all nervous diseases. As they are all dependent upon an augmented excretion of phosphates from the nerve-cells the treatment is according to him, quite simple and should consist in supplying phosphorous again to these tissues. The best form is the glycerophosphate of potash as this element is found in the nerve centres and elements.

TREATMENT OF ERYSIPELAS BY THIOL.

Dr. Rudneff of St. Petersburg (*Hospitals Tidende*, No.'19, 1894,) has obtained good results in erysipelas by application of a forty per cent. solution of thiol to the affected parts, five times a day.

EPILATORIES AS ANTISEPTICS.

Dr. Annequin (*La Semaine Mèdicale*, No. 43, 1894) has employed certain epilating substances as the hydrosulphate of calcium or the sulphate of barium to remove hairs and act as antiseptics where it is impossible to remove all the hairs by shaving and at the same time to render the part completely antiseptic as in operation on the perineum, the scrotum, etc. He adds the hydrosulphate of lime to water until it acquires a pasty consistence when it is applied to the region to by epilated. Epilation is complete in ten minutes, at least, without the least irritation or pain. The follicles are not destroyed for the hair will reappear after a few days. The sulphate of barium may be formulated as follows:

℞ Sulphide Barium,..... 10 | o (℥ijss.)
Powdered Starch,.....
Oxide Zinc, āā, ... 5 | o (ʒj¼.)

This powder should also be added to have water added until it forms a paste.

CEYLON CINNAMON AS A PALLIATIVE IN CANCER.

Dr. J. C. Ross (*La Semaine Mèdicale*, No. 43, 1894,) has found that the internal use of the bark of Ceylon cinnamon is an excellent palliative measure in the treatment of carcinoma of various internal organs; it must be given in large doses. He employs the following formula:

℞ Ceylon Cinnamon Bark.... 350—400.o. (ʒxj—xiij.)
Water..... 3 litres. (3 qts.)

Boil this mixture down to a quart. Decant without filtering. Take a pint every twenty-four hours by the half-glassful, preferably after eating. Shake the bottle well before taking.

This treatment has given him good results in carcinoma of the stomach, breast, tongue, rectum and uterus. The principal effect is to quiet the pain, decrease the odor and improve the general condition of the patient. With this treatment patients who have been for a long time under morphine have been able to dispense with this drug.

Must Have A Large Collection.

Mabelle—Brother Tom always gives me a bracelet every birthday.

Edith—You ought to start a jewelry store.—*Chicago Record.*

CORRESPONDENCE.

"DO NOT TURN OUT THAT CLOT."

EDITOR OF MEDICAL AND SURGICAL REPORTER:—Your editorial "Do not turn out that clot," in the August 4th, number of REPORTER, struck me the more forcibly on account of an occurrence in my own practice a month ago.

I was called to attend a lady, who was as near a wreck from malaria poisoning and neglect as I ever saw. The first of a pair of twins came away all right, alive. I found the second one dead. On passing the hand I found the placenta was attached to the left side, and partly over the mouth of the womb, which had caused excessive hemorrhage. I ruptured the sac and placed the head in position, and the dead child came away. The womb contracted down to the usual size and I was congratulating myself, when, on examining, I found the womb nearly double its size of half an hour previous.

I made an examination and found but very little flow from the vulva; I had given nitro-glycerine and strychnia, as also ergotole. Whatever was to be done! I was afraid to meddle any more, so awaited reaction—pulse down to 20 beats and hardly perceptible, and respiration about the same. I thought I had a dead woman on my hands. Well, I waited half an hour. No one present but an ignorant old negro and myself. Gradually the pulse became stronger, then a little more frequent. I do not know how near a faint the lady was, because I did not look. She was perfectly limp; head on level with body. It was a dull half hour for me. But the rally was good and held all right. I applied hot cloths, etc., over abdomen, gave opiates and left seven hours after. My next visit, twelve hours afterward, found womb gradually reducing in size, and all doing well. I argued from the amount of blood lost from such a case (nearly a gallon,) it was best to let the clots alone—because the womb was hard, not flacid, and the clots would answer as a tampon.

Your editorial convinces me that in *this case* I had done the right thing. This is the first case of the kind that I have encountered. It makes me feel "queer" still, when I think of the hours I looked and waited at that time.

Fraternally,

BRODNAX, LA. BEN. H. BRODNAX,

CHRISTIAN SCIENCE.

EDITOR MEDICAL AND SURGICAL REPORTER:—In Dr. Longsderf's article on "Christian Science and its relation to the Medical Profession," in the August 11th, number of your JOURNAL, after admitting that there were thousands of instances of authentic cures on record as a result of christian science, she faces about and says "The importance of some definite restraining force for these abuses can scarcely be overestimated, and if public opinion and the advanced *philosophical science* of our era have been powerless to effect this, it would seem to come into the province of legislative enactment."

This is unjust, inhuman, selfish and cowardly. We would hardly expect one of the *gentler sex* of our profession to advocate such hard measures. We should not imprison our fellow-mortals simply because they effected cases that baffled our skill. "If ye have faith like a grain of mustard ye can remove mountains."

We are materialists. We look at our patients as mere machines. We forget that they are endowed with souls, (whatever that may be.)

We bow down and worship a lot of microbe resurrectionists, who were never in a sick room except that of dogs and guinea pigs, and have them dictate to us the quickest way to obtain a post-mortem.

To read some of the articles of our specialists, one feels that it is impos-

for any to die—and yet a glance at the death rate will reassure one that St. Peter is kept as busy as of yore examining passports. We should hail with delight any measure that has effected "thousands of cures," whether our dull minds can comprehend the rationale or not. For there is not an anatomist, or histologist, or physiologist, or neurologist living to-day who has a clearer insight of what *life* really *is*, than had the Father of medicine.

"There are more things in heaven and earth, Horatio, than are dreamt of in your philosophy."

Yours truly,

J. Newton Hunsberger,

Skippack, Pa.

A CORRECTION.

Editor Medical & Surgical Reporter:—I have just noticed an important error in the report sent you of my demonstration of "A new Method for Reduction of Fractures of the Lower End of the Radius" before the Philadelphia County Medical Society which recently appeared in your valued journal.

The second paragraph should read: "The surgeon stands in front of the patient and interlaces his fingers beneath the *pronated* wrist and palm of the injured member," etc., not "supinated wrist" as printed. As all that follows depends upon the wrist being in pronation.

Very truly,

Thomas S. K. Morton.

TREATMENT OF DYSMENORRHŒA.

After detailing the remedies usually employed in the relief of minor degrees of menstrual pain, such as antipyrin, phenacetin, codeine, etc., Schwarze remarks that in many cases of obstinate character local treatment is generally necessary. This, however, many patients are unwilling to undergo; and in the case of virgins it is very undesirable that they should be subjected to it. In that event, Schwarze mentions two modes of treatment of some value which have not received the attention they deserve. The first is the gymnastic treatment introduced by Thure-Brandt. It is necessary here to distinguish between dysmenorrhœa in which inflamatory processes are present, and that where they are absent. In the latter class, to which the menstrual pain of most virgins and sterile women belongs, this method is of particular value, whether anæmia or chlorosis be present or not. It is a general treatment of the body, though the movements recommended by Thure-Brandt for this purpose are limited to five, and are carried out chiefly with the lower limbs. These may be conducted at home by the patient's friends. If possible they should be performed daily, and in any case daily for a week before the expected menstrual period. The influence of bodily movement upon the lessening of dysmenorrhœa is shown by the beneficial effect of dancing and riding just before the onset of menstruation. The second remedy that is worth consideration in obstinate cases is the administration of viburnum prunifolium. Its action is narcotic, relieving pain and acting more particularly on the uterine nerves, and is of especial value in the non-inflammatory form. It may be given in the form of fluid extract, one teaspoonful three times a day for about a week before the expected period, and during it. It is not unpleasant to take, and is free from after-effects. In dysmenorrhœa associated with inflammatory changes it is of little use.—*Therapeutfsche Monatshefte.*

THE MEDICAL AND SURGICAL REPORTER

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SATURDAY, SEPTEMBER 1, 1894.

EDITORIAL.

THE DETECTION OF TYPHOID IN WATER.

The communicability of typhoid fever by drinking water, has become one of the cardinal principles of sanitary science. On this account water becomes one of the efficient channels through which the virus of this most dreaded of fevers can gain access to the body. The possibility of the infection of water is readily understood when the fact is considered that typhoid bacilli will live in water for many days, thus being capable of a wide area of dissemination from the infected source. These facts and their direct bearing upon the occurrence and frequency of typhoid fever in certain localities, are well known to physicians and need not be discussed anew.

The importance, from a sanitary standpoint, of being able to detect the presence of these bacteria in water suspected of conveying them, is a matter both of interest and of controversy. It may be said that the most difficult feature in their detection is the differentiation of typhoid bacilli from the other bacteria, more especially *Bacillus coli communis*, which resembles them very closely in their morphological characters. A brief summary of the more important and practical methods for differentiating these bacteria and of detecting typhoid bacilli will be of interest.

Behavior in milk. Dunbar *Zeitschrift für Hygiene*, 1892, p 491,) has pointed out anew the difference in the reaction of these bacteria in milk. In sterile milk, the typhoid bacilli render the liquid slightly acid but never bring about its coagulation. On the contrary, *Bacillus coli*, at the temperature of the body, coagulates the milk in from twenty-four to forty-eight hours, at the same time rendering it strongly acid in reaction.

The production of gas. Smith (*Centralblatt für Bakteriologie W. Parisitenkinde*, xi (1892) p 367,) pointed out the fact that the typhoid bacilli when grown in bouillon containing certain sugars, in the fermentation tube, did not produce any gas, while the colon bacteria produced a large quantity of gas composed of CO_2 and H.

Uffelmann's Method. This method, described by Uffelmann (*Berliner Kli-*

Wochenschrift, 1891, No. 35, p. 827,) is based on the idea that very few bacteria can grow in a culture medium as strongly acid in reaction as can the typhoid bacilli. For the demonstration of this method the author used gelatin to which a definite quantity of citric acid (eight drops of a 5 per cent. citric acid solution to 10 c.c. of gelatin) and methyl of violet have been added. The typhoid colonies assume a blue color, which becomes more intense with their age, and is finally of a more deeper tint than the surrounding gelatin. By means of this method, Uffelman states that he was able to so far eliminate other organisms that a water, in which by using ordinary gelatin 12,500 colonies were obtained, when tested by this special method exhibited only nineteen. From another sample instead of one hundred and eighty, only eleven colonies appeared, and of these, six are stated to have been composed of typhoid bacilli. The method, however, has been shown to possess certain elements of disadvantage, as sometimes the typhoid bacilli fail to grow in it, and Dunbar showed that *Bacilli coli* will grow as vigorously as the typhoid bacilli in this medium.

Parietti's Method. This author found that typhoid bacilli were capable of growing in bouillon containing a considerable quantity of carbolic acid, while *Bacillus coli* and other bacteria failed to develop.

Frankland (*Micro-organism in Water*, 1894, p 273,) shows that the period of incubation must extend over at least forty-eight hours, especially when the number of typhoid bacilli is small. The solution used in the test is composed of five per cent. carbolic acid, and four per cent. pure hydrochloric acid in distilled water. From three to nine drops of this solution was added to each tube of 10 c.c. of bouillon. Vincent (*Compt. rend. Sciences de la Soc. de biologie*, 1890) endeavored to destroy bacteria other than typhoid, in water, by shaking it up with a five per cent. solution of Phenol before making the plates. While this method may enable one to eliminate many species of bacteria, Vincent himself acknowledges that *Bacillus coli* could not be eliminated by this process. Dunbar has clearly pointed out the fact that *Bacillus coli* is able to withstand a larger quantity of phenol than typhoid bacteria.

Several other methods of applying phenol to culture media have been suggested. The facts in hand, however, show that it is of little or no value in differentiating the typhoid and colon bacteria. By the judicious application of phenol, there appears to be no doubt that the discovery of typhoid bacteria is greatly facilitated. On subsequent plate cultivation the colonies will be limited to those of *Bacillus coli*, the typhoid bacillus, and possibly a few other forms. Any colonies at all resembling those of typhoid bacillus must then be further examined. For purely differential purposes, the character of the growth on gelatin, the production of gas when grown in a bouillon containing glucose in the fermentation tube, and by cultivating it in milk for the coagulation of the casein. The production of iodol is also a property of the colon bacteria not possesssed by the typhoid bacillus.

Care of the Teeth.

A dentist advises that acids are even worse than sweets upon the teeth and inveighs against the eating of oranges and apples at night without carefully rinsing the mouth afterward. Persons, too, with sensitive teeth, who dread the hour in a dentist's chair, will find their suffering somewhat relieved by being careful what is eaten before the appointment. Acids that set the teeth on edge are a poor preparation. The same authority recommends a small rubber band as the best toothpick. These are really better than the dental floss often advertised, or certainly quite as good, and much more apt to be at hand.—*New York Times*

ABSTRACTS.

THE ANIMAL PARASITES WHICH WE OBTAIN THROUGH OUR FOOD.

Dr. Wardell Stiles, Zöologist, Bureau of Animal Industry, U. S. Department of Agriculture, in a lecture before the Sanitary League of Washington, D. C., says:

As I am to show you some of the animal parasites which we may obtain from food, permit me to invite you all to lunch with me for half an hour or so, that you may see some of the wonderful objects it is possible for us to swallow without knowing it. The repast, to which I now invite you, is not such a one as you would yourself prepare, but it is one which might be prepared by the ignorant and slovenly servants of ladies who consider it a disgrace to know anything about household matters. For your comfort, however, I will tell you that a number of the parasites which I shall mention are not found in Washington, except as specimens in the various scientific collections,

The first course consists of soup—let it be any kind you wish, bouillon, mock-turtle or anything else. As we are about to take a spoonful we notice a curious object floating around in it, which upon closer inspection turns out to be a small beetle (*Blaps mucro nata*) closely related to our death-watch beetle. If we swallow this bug, the insect itself would not injure us in the slightest, for it would be digested, but according to the investigation of an Italian zoölogist, a little organism lives in this insect which, upon coming into our digestive tract and becoming free from the body of the bug, develops into the parasite known to the scientist as a thorn-headed worm (*Echinorhynchus moniliformis*). This is a curious worm about 2 to 4 inches long, with a strong proboscis on its anterior end, armed with several rows of hooks. Like many other parasites, it possesses no intestine, but, fastened with its head in the wall of our digestive tract, it floats in the contents and absorbs nourishment through its entire outer surface. For your comfort I will state that this is not a common parasite in man, but lives in rats. The rats scatter the eggs around, and these are swallowed by beetles, in which the larval form develops. When the insects are eaten by rats, or persons, the larval then develops into the adult and the life-cycle is thus completed. It may be interesting for you to know that when the Egyptian ladies wish to become stout, they are said to eat a beetle of this genus, and thus they lay themselves open to possible infection with these worms. Perhaps instead of finding a *Blaps* in our soup, we discover some other bug, say a small butterfly, by the name of *asopia farinalis*, or a beetle known to scientists as *akis spinosa*. In that case, instead of becoming infected with the thorn-headed worm, we should have caught a small tape worm (*Hymenolepis*).

You may think I have stretched a point by saying that these bugs may be found in soup, but I assure you that it is not an uncommon occurrence to find insects in soup, and that people swallow these insects, containing the germs of various parasites, is shown by the fact that the parasites I have mentioned occur in man and that the only way he could possibly catch them is by swallowing the insects I have referred to.

While our soup plates are being removed we unconsciously nibble at a piece of bread, at the same time that we are discussing the weather or some other equally exciting topic. Now let us suppose that this bread was cut by our cook—who, as I intimated, is not the most cleanly person in the world. The cook may herself be infected with pin-worms; she has unconsciously gotten some of the microscopic egg upon her hand, and in cutting the bread has unconsciously transferred them to the bread. They are too small for us to see, and in eating the bread, we accidently become infected with these germs. Pin-worms (*Oxyuris vermicularis*) are among the most common animal parasites found in human beings; probably fully one-fourth, possibly one-third, of the persons in this room have at some time during his or her lifetime harbored these creatures. If only a few worms were present, we were not troubled very much, but if many were present, we probably were quite unhappy for the time being, notwithstanding the enormous doses of soothing syrup or other mixture which our well-intending mothers gave us to keep us from being so restless during the night,

little suspecting what the real cause of our restlessness was.

These parasites are, as I have said, very common and may be obtained through solid food which has been handled by persons who are affected with them, and are not careful enough about washing their hands, or they may be obtained through unfiltered or unboiled drinking water, or through milk, when the milk-can, before leaving the farm, or even afterwards, has accidentally (?) stood for a few minutes too near a contaminated water supply.

If our servant has allowed the lid of our bread-box to stand open, and the mice have gotten in there, they have scattered on the bread microscopic parasites known to the zoölogist as *Megastoma intestinale*, and as we eat the bread we become infested with these germs also.

Our fish has now been served. Some of us have taken pike, others have taken turbot, still others have chosen some other fresh-water fish, but the essential point is that the fish has not been cooked enough. As we are eating this fish, one of us, who perhaps has sharper eyesight than the rest, discovers a white object, about one-fourth to one-half inch in length, which differs slightly from the muscle. This object upon closer inspection proves to be the germ or larval stage of the broad Russian tape-worm (*Bothricephalus latus*) which is the largest parasite found in man. The worm grows to be 32 feet in length. I spoke of it as a worm. In ordinary parlance we generally call a tape-worm a single animal, but scientifically speaking, the tape-worm is a colony of animals. The head, provided with two suckers, by means of which it holds fast to the wall of our intestinal tract, is what we have swallowed, as a germ or larva, with the fish, and represents the mother of the colony; while these segments, of which there may be hundreds, each represent individual worms of a second generation, the mother and all her daughters remaining joined together as a colony. It may be a satisfaction for you to know that this parasite is rare in America.

As our fish-plates are removed and we are waiting for the next course, consisting of meats, we introduce a new topic of conversation by taking a sip of unfiltered and unboiled water. It would have been better, perhaps, had we not taken that particular drink, for we have the risk of swallowing the germs of a number of different parasites.

We might, perhaps, have swallowed the eggs of the ordinary lumbricoid worm (*Ascaris lumbricoides*). This is one of the most common of the parasites found in the human species. I do not know how common it is in Washington, but I have records of examinations of 7,547 persons in certain European cities, and of this number 962 persons, or 12.7 per cent., or about one person in every eight, were infested with this worm, and there is no reason to suspect that the worm is any less frequent in this city. It is especially frequent among the school children, negroes and idiots, in fact among all classes of people who are not cleanly about their personal habits, and who drink unfiltered or unboiled water. In the city of Paris, where the entire water supply is filtered, the worm is exceedingly rare.

If we happened to be in Egypt, or in certain parts of Asia, we might have become infected with another worm, the guinea-worm by name (*Dracunculus medinensis*), which some scientists look upon as the fiery serpent of the children of Israel. This parasite, of which there is probably only one specimen in the United States, is about a yard long and lives under the skin; it produces large swellings, accompanied by an intense burning sensation, hence the name fiery serpent or fiery dragon, which it retains to the present day. The parasite is caught by swallowing small crustaceans in unfiltered drinking water, for the larval stage of this worm lives in these minute crabs, *Cyclops* by name.

Although we are not liable to catch the fiery serpent of the children of Israel in this part of the world, there is a somewhat similar parasite which we do stand in danger of catching. This worm, which scientists call a thread-worm (*Filaria sanguinis hominis*), lives in various parts of the body; the young embryos of the worms are found in the blood and are so small, about 1-1000 of an inch long, that a large number may be found in a single drop of blood. Now, when mosquitoes bite a person infected with these worms, the insects swallow a number of these microscopic germs along with the blood. The worms grow somewhat while in the body of the mosquito, and when Mrs. Mosquito, after spending four or five days digesting her meal, goes to some body of water to deposit

her eggs, the worms are ready for the next step in their life-history. After the mosquito dies and falls into the water, the young worms devour the internal organs of the insect, leave the mosquito and swim around until they are swallowed by the person who is careless enough to drink unfiltered or unboiled water.

In some other parts of the world another curious animal is caught from the water, an animal about half an inch long, which spends its earlier stages in a small crab, but which after being swallowed by man, lives in the large veins in his abdomen and causes a very serious disease.

But we have caught enough of parasites from that drink of water—let us pass on with our lunch. We have before us on the table a number of different kinds of meat. Some of us may prefer tongue, or roast beef; others may prefer pork of some kind, say roast pork, boiled ham, or if we are inclined towards German customs, we may take some duck stuffed with sausage. Let each one select his, or her own meat, and I will tell you what parasite you have swallowed, taking it for granted that all of the meats are underdone.

Those who have chosen beef in any form, as tongue, roast beef, smothered beef, steak, or stuffed veal, etc., have run the risk of catching the so-called beef-measle tape-worm (*Tænia Saginata*). This is the most common of the eight different species found in man. It is generally about fifteen to thirty feet long and is made up of a head and about 1,200 to 1,300 segments, each one of which you will recall represents a separate worm. These small bladder-like structures, about the size of a small bean, resemble bits of fat to a certain extent. These are the objects you swallow when you catch a beef-measle tape-worm. This cyst contains a tape-worm head bearing four suckers. When this is swallowed, segments begin to form very rapidly. In treating for tape-worm, it is always necessary to get rid of this head, for if that remains in the body the tape-worm will grow again.

Those of us who chose pork chops, roast pork, ham, or duck stuffed with pork sausage, have of course escaped the danger of becoming infested with the beef-measle tape-worm, but have run the risk of catching a smaller, but still more dangerous, tape-worm, *i. e.*, the pork-measle tape-worm (*Tænia solium*). The object we swallow in this case is almost identically the same as the object we would have swallowed had we eaten beef. The bladder-worm (*Cysticercus cellulosus*) lies in the muscle, surrounded by connective tissue, and as it comes into our stomach, the surrounding cyst is digested. The head and neck pass to a point in our digestive tract a little way below our stomach, and then begins the formation of segments, the segments always forming near the head, so that the last segment, that is, the segment furthest from the head, is the oldest, while the segment nearest the head is the youngest.

I said that this tape-worm is more dangerous than the beef tape-worm. Not because it causes us more pain while in the digestive tract, however, but because the microscopic embryos, which are formed in the segments, can under certain conditions bore through the intestinal wall and reach the inside of the eye or some other part of the body, and there develop into a bladder-worm. In this way, man, as well as hogs, may become infested with pork-measles.

But this is not the only parasite we have run the risk of catching in eating half-cooked pork. We may have eaten a piece of meat infested with the much dreaded trichinæ.

These trichinæ are curious little creatures, and although they are objects of considerable fear to the physician, who knows only too well that if these parasistes once gain access to a patient's muscles, he is utterly powerless to reach them and kill them with any medicine known, yet to the zoölogist these worms are of considerable interest.

They are very small, as you will believe when I state that as many as 350,000 may live in a single pound of meat. These minute worms live inside of the muscle-fibre of pork, coiled up like a spiral, with a small cyst around them. When we eat this pork, the meat upon coming into our stomach is digested and these minute cysts are liberated. The juices of our stomach then dissolve the cysts and Mr. and Mrs. Trichina pass down below our stomach and proceed to make life unpleasant for us. Mrs. Trichina becomes the mother of about 10,000 to 15,000 wriggling youngsters within a month's time, and these latter bore through our digestive wall and journey to the muscles. Upon arriving at some muscle which they find to let, they

into it and proceed to take possession of the contractile substance. The more of the contractile substance the trichinæ eat, the less there is for us to use in swallowing, breathing, walking, etc. After some weeks, however, the parasites have satisfied their appetite, and they become encysted, and our muscles present the same appearance which the pork had before we eat it. If our physician has succeeded in stimulating us up to the stage when the parasites become encysted, we will recover from the disease, and the trichinæ will do no further harm, until we go to Africa as missionaries, when the savages may suddenly discover that they have a bad case of trichinosis, should they not allow us to carry on our work unmolested. I should not, however, advise that we require candidates for the missionary field to first become infected with trichinæ in order to discipline the cannibals, but had our first delegation of missionaries passed through the disease of trichinosis before going to their fields of labor, the savages would by this time have learned that it was dangerous to use missionaries as an article of food.

I stated that we obtained our trichinæ from half-corked pork, but you may wonder how the hogs became infected. The matter is very simple indeed. These parasites are also found in rats, and as the hog is very fond of rats as a *delicatesse*, the hogs catch the parasites by eating rats. Rats keep up the infection among themselves by eating each other, for rats are cannibals.

We have, perhaps, not noticed that the odor of the meat brought our favorite dog into the dining-room. He is practically a member of the family and petted by all, none except the scientist looking upon him as anything except a most faithful friend, old Dog Tray! The scientist, however, is hard-hearted enough not to appreciate this friendship, and believing the proper place for a dog is the cellar, the barn-yard, the dissecting-room, or the dog-pound, he hygienically looks upon the dog as his enemy. Nevertheless, some of you do not share these opinions, and as the dog comes to you, you pet him and allow him to sniffle and lick your hand. But let us look for a moment at the animal parasites which the dog has given to you during that short caress!

Beloved old Dog Tray has in his nose a parasite about two to five inches long, a so-called tongue-worm (*Linguatula rhinaria*;) in sniffling and licking your hand he has deposited there some microscopic eggs, and the next time you take a piece of bread, you will transfer these eggs on the bread to your mouth. The eggs will be swallowed and the germ will bore from your digestive tract into your liver, and there develop into a parasite about one-quarter to one-half an inch long.

Or in caressing the dog, you have unconsciously gotten a flea or a louse upon your hands, perhaps under your finger-nails, and later you have swallowed that. It may now be a comforting thought for you to know that inside of that flea or louse, there lives the larval stage of a tape worm (*Dipylidium caninum*) with which you have become infected. But that is not all.

The most dangerous animal parasite which man has, is a so-called hydatid, which is the larval stage of a small tape-worm (*Tænia echinococcus*,) found in the dog. From the very nature of the habits of the dog we must not be surprised to find the eggs of this tape-worm upon his coat. Petting him, you get these eggs upon your hands; from your hands to your mouth is a short distance; you swallow the eggs and have become infected with the dreaded *Echinococcus*! The echinococcus develops in your liver, in your lungs, in your brain or elsewhere, and you suddenly discover the fact too late—perhaps it is not you who discovers it after all, but the physician who makes your post-mortem,—that the dog is your enemy rather than your friend. I am not now referring alone to the miserable collections of animated bones and dog-skins which wander into our city from Virginia and Maryland, but I refer to mamma's darling little poodle as well. In fact, from statistics it appears that this hydatid parasite to which I refer is most frequent among the dirty Icelanders who live in the same huts with their dogs, frequently sharing the same plate, and next in frequency in women who keep pet lap-dogs.

But our salad has come on the table. This salid—let it be any kind you prefer—was grown in a rather damp field; the year was perhaps an unusually damp year; and Bridget or Amanda is particularly lazy today and did not wash the salad as well as she would have done, had she expected that you would inspect the various courses

before they came on the table. Let us see what parasites we swallow this time.

First of all, we swallow a most remarkable animal, known as the common liver-fluke (*Fasciola hepatica,*) a parasite which is not particularly frequent in man, but one which is more common in sheep and cattle. A parasite which in 1830 killed more than 2,000,000 sheep in England, causing an estimated loss $20,000,000; and one which killed 1,000,000 sheep in Buenos Ayres in 1882; a parasite which kills hundreds of cattle and sheep in Texas every year, and has recently swept off nearly all the cattle on some of the Sandwich Islands. This parasite lays about 45,000 eggs, in each of which, under favorable conditions, a small ciliated embryo develops; this embryo swims around in the water until it finds a certain swamp-snail, into which it bores its way. Upon coming to rest (as a sporocyst) it produces a third generation (redia) which is however very unlike the first or second. This produces still another different generation (cercaria) which leaves the snail and encysts itself upon some plant, say, the kind used in our salad. When we swallow this cyst, the animal seeks out our liver and developing into the adult, proceeds to make trouble for us.

Nor is this the only fluke which we might catch in eating salad. A smaller one, the lancet-fluke of Germany (*Distoma lanceolatum*) or the Japanese liver-fluke (*D. sinense*) may be gotten in this way. The Chinese lung-fluke, which also lives in cats and tigers, and which Dr. Ward has recently found in this country, might make their homes with us, brought to us by improperly prepared food.

But I have introduced enough parasites to you to show you the necessity of preparing food carefully before it is placed upon the table. I hope I have not taken your appetites away for your meals tomorrow by making you disgusted with food, although I cannot say that I should feel very sorry if I had made you disgusted with pet dogs. Remember, that if your food is properly prepared, if your drinking water is boiled or filtered, and if you keep dogs from becoming too intimate friends with you, there is absolutely no danger of your catching any of these parasites that I have mentioned. But if you insist upon allowing your pet poodle the privilege of the dining-room, if you are careless about boiling or filtering your drinking water, and if you allow your careless servants to prepare your food as they wish, you in the meantime feeling it beneath you to enter the kitchen and see how matters are going on, you lay yourselves open to infection not only by these parasites of which I have spoken, but by many others.—*Diet and Hygiene Gaz.*

GENIUS AND DEGENERATION.

It is a strange fact, however, and one not noticed by Lombroso or any other writer, as far as I know, that mechanical geniuses, or those who, for the most part, deal with materal fact, do not, as a rule, show any signs of degeneration. I have only to instance Darwin, Galileo, Edison Watts, Rumsey, Howe and Morse to prove the truth of this assertion. It is only the genius of æstheticism, the genius of emotions, that is generally accompanied by unmistakable signs of degeneration. Swinburne's poems show clearly the mental bias of their author, who is described as being peculiar and eccentric. Many of the men of genius who have assisted in making the history of the world have been the victims of epilepsy. Julius Cæsar, military leader statesman, politician and author, was an eplieptic. Twice, on the field of battle, he was stricken down by this disorder. On one occasion, while seated at the tribune, he was unable to rise when the senators, consuls and prætors paid him a visit of ceremony and honor. They were offended at his seeming lack of respect, and retired showing signs of anger. Cæsar returned home, stripped off his clothes and offered his throat to be cut by any one. He then explained his conduct to the senate, saying that he was the victim of a malady which, at times, rendered him incapable of standing.

Many men of genius have suffered from pasmodic and choreic movements, notably Lenau Montesquieu, Buffon, Dr. Johnson, Santeuil, Crebillon, Lombardini, Thomas Campbell, Carducci, Napole-

and Socrates. Suicide, essentially a symptom of mental disorder, has hurried many a man of genius out into the unknown. The list begins with such eminent men as Zeno, Cleanthes, Dionysius, Lucan and Stilpo, and contains the names of such immortals as Chatterton, Blount, Haydon, Clive and David. Alcoholism and morphinism, or an uncontrollable desire for alcohol or opium in some form or other, are now recognized as evidences of degeneration. Men of genius, both in the Old World and in the New, have shown this form of degeneration. Among the men and women of genius of the Old World, who abused the use of alcohol and opium, were Coleridge, James Thomson, Carew, Sheridan, Steele, Addison, Hoffman, Charles Lamb, Madame de Staël, Burns Savage, Alfred de Musset, Kleist, Caracci, Jan Steen, Morland Turner (the painter), Gerard de Nerval, Hartley Coleridge, Dussek, Handel, Glück, Praga, Rovani and the poet Somerville. This list is by no means complete, as the well-informed reader may see at a glance, yet it serves to show, however, how very often this form of degeneration makes its appearance in men of genius. In men of genius the moral sense is sometimes obtunded, if not altogether absent. Sallust, Seneca and Bacon were suspected felons. Rousseau, Byron, Foscolo and Caresa were grossly immoral, while Casanova, the gifted mathematician, was a common swindler. Murat, Rousseau, Wagner, Clement, Diderot and Praga were sexual perverts. Genius, like insanity, lives in a world of its own, hence we find few, if any, evidences of human affection in men of genius.

Dr. Johnson, who was a sufferer from *folie du doute*, had to touch every post he passed. If he missed one he had to retrace his steps and touch it. Again, if he started out of a door on the wrong foot, he would return and make another attempt, starting out on the foot which he considered the carrect one to use. Napoleon counted and added up the rows of windows in every street through which he passed. A celebrated statesman, who is a personal friend of the wirter, can never bear to place his feet on a crack in the pavement or floor. When walking, he will carefully step over and beyond all cracks or crevices. This idiosyncrasy annoys him greatly, but the impulse is imperative, and he cannot resist it. Those who have been intimately associated with men of genius have noticed that they are very frequently amnesic or "absent-minded." Newton once tried to stuff his niece's finger into the bowl of his pipe, and Rovelle would lecture on some subject for hours at a time, and then conclude by saying "But this is one of my arcana which I tell to no one." One of his students would then whisper what he and just said into his ear, and Rovelle would believe that his pupil "had discovered the arcanum by his own sagacity, and would beg him not to divulge what he himself had just told to two hundred persons."

We must not confound genius and talent—the two are widely different. Genius is essentially original and spontaneous, while talent is to some extent acquired. Genius is an abnormality, but one for which the world should be devoutly grateful. Psychos, in the case of genius, is not uniformly developed, one part, being more favored then the others, absorbs and uses more then its share of that element, whatsoever it be, which goes to make up intellectuality, hence the less favored or less acquisitive parts show degeneration. Why genius should exist is one of the unexplained phenomena of nature, but that it is the result of natural causes I have not the slightest doubt.—*Med. Rec.*

Etherization of Incarcerated Hernias.

Since 1891 Gussenbauer has successfully made use of Finklestein's method of treating incarcerated hernia. This consists in dropping ether (one to two tablespoonfuls every quarter of an hour) upon the hernia ring and the tumor, the skin over these places having been previously anointed with vaseline to prevent irritation from the ether. This is employed from one to three hours in connection with elevation of the pelvis and gentle taxis. Among 135 cases treated during this period this treatment was indicated in but 31; in the others, owing to the long duration of the strangulation and the violent symptoms (marked tympanites, impending or developing gangrene), herniotomy was resorted to. Of these 31 cases 25 were treated by the ether method, the remainder by simple pelvic elevation and application of ice. The application of ether was successful in 20 cases (16 inguinal, 1 parumbilical, and 3 crural hernias), while in five cases it was necessary to subsequently perform herniotomy.

SOCIETY REPORTS.

OBSTETRICAL SOCIETY OF CINCINNATI.

Dr. Edwin Ricketts read a paper on

EARLY DIAGNOSIS OF CANCER OF THE UTERUS.

(See page 285.)

DISCUSSION.

DR. A. W. JOHNSTONE: This is a most important subject, and I know every one of you are sitting here thinking of cases. I was thinking of a case that I saw years ago, before such a thing as extirpation of the uterus was ever thought of; had we known then what we know now the life of that patient would probably have been prolonged, but I doubt whether it would have been saved. I speak of it to illustrate the rapidity of growth. I saw the case in 1884. The patient was large and fleshy, and had no constitutional symptoms of any description, but had a pain about the uterus. I found what I thought was a little fibroid of the uterus. In less than a week I saw her again; she had a little hemorrhage, and sticking in the mouth of the uterus was a little polypus. Microscopical examination showed it to be cancerous. In less than three weeks it had filled the cavity. It was a simple ordinary carcinoma. The thing to do in carcinoma is to remove it as clean as you can. However, it is so insidious that sometimes before it breaks down or there is any smell the case is gone, and you will find it involving the lymphatics and almost in a hopeless condition. If the patient is a little stupid and pays no attention to herself, the slight symptoms may be overlooked and you will not be called until it is too late. That has been my experience, and I suppose always will be the experience of all of us.

Some of you know my ideas about carcinoma. It has been a fad of mine for some time, and my ideas have crystalized down to the view that it is due more to the failure of the trophic nerves than to anything else. You know they are totally different from the adult tissue, and it is a trite saying that carcinoma is simply a return to the fetal state. Years ago I studied this in the lymph glands, and it is really beautiful to see that the transformation of them is very similar to the process of bone. After studying it all over I have come to the conclusion that it must be some failure of the trophic nerves. I remember about a year ago, while walking home from the Academy with Dr. Conner, after a discussion in which there had been nothing said as to the cause, I suggested this idea to him, and he said: "Yes, and you will see more than that if you study your cases closely. You never saw a case of cancer in your life that was not preceded by some nervous strain This is frequently the death of a husband or child, or financial reverses." And he quoted Grant's case as an example, where he had climbed to the highest pinnacle in the United States, and his son had wrecked him, and he said: "That is a typical case of cancer, and you will always find them preceded by some terrific nervous strain." So I believe that carcinoma is due—and sarcoma to a certain extent, too—to a failure of the trophic nerves; that this storage-battery is exhausted in old people, so we do not have the central control. The cancer is found in the remnants of the fetal structure; in the ovary it usually occurs in hilum, which is really the remnant of the second set of kidneys, which should have shrunken up and been only scar tissue. However, there is carcinoma is likely to appear. In the uterus, it is in the cervix, just after the uterus passes out of its usefulness. The same way with the breast, where it is most likely to occur at the menopause.

There is another thing you may urge against the etiology of carcinoma. I remember years ago, as a boy, one thing I read in either the London *Lancet* or *British Medical Journal*, that gave a clue to the development of carinoma. Some surgeon of the British Army in the foothills of the Himalayas, came in contact with the Hindoos. In their clothes they have a foolish habit of carrying a little bit of charcoal, and when cold they just squat down on it so as to bring it against the thighs or chest. In this way scars are produced, and he gave a list of two or three hundred carcinomas comming out of these scars on the thighs and chest,

localities where we never hear of it in other parts of the globe. The scars are kept irritated constantly by the charcoal being carried under the clothes and giving off fumes and irritative gases.

I believe in every part of our body we have a nerve coming from the trophic centre, whether this is the stomach or the cerebro-spinal system, which keeps the tissues of the body regulated. With that cut off, the tissues are apt to do their own sweet will, and the tendency is to go back to the fetal state. I believe we are a great republic, with a great central control, and every nerve in the body has to have a certain control. When this is cut off, the cells go back to the original state. You may say this is all theory and of no practical good, and you cannot convert it into dollars. I believe you can; it is not time yet.

I have one case which I have followed carefully and thoroughly. I do not feel I should as yet make a report of it, but I will tell you what I have seen. There is no mistake about it being a cancer; it came to me with a terrific ulceration, and was so diagnosed by two men in New York City. I opened the abdomen to take it out, but found a big chunk of a cancer involving the right ureter; I closed it up and quit. I then went to work to increase her nerve force if possible, and at the same time cleansed the vagina daily with the peroxide of hydrogen. Whether it was the disinfection or the manifest improvement of the woman's condition, I do not know, but that ulcer healed and skin grew over it. But the nodule continued growing. I have been working on the case over a year, and the gentleman from New York, whom I had previously seen, said he thought she would be under the sod long ago. The cancer has not been arrested, except to the extent that the frightful itching and the boils she had about the labia have all ceased; the growth of the cancer has not been arrested, but the ulceration was arrested.

This is a line along which I have been working for some time, and I hope some day we will have something; I beg of all of you to go to work along that line, restoring the nerve-force of the patients, so that if we get them up we can keep them from coming back. I remember my old professor saying that the day is coming when we will cure cancers with the hypodermic syringe, and I must say there may be something in it.

I can only congratulate the essayist upon the paper of the evening, and it will be my intention to follow his instructions as far as possible, and take them out as soon as possible. Some I have cut out, and now after ten or twelve years they have not returned. The longest case of cancer I know of was in a very young fellow, a medical friend of mine, two years younger than I am. He had yellow fever, and in the delirium bit his tongue. He was an interne in the Charity Hospital of New Orleans. He had Bright's disease afterward, and this sore place he afterward went to doctoring, and a nasty granular tissue sprung up. It was cut out and examined, and he was told it was cancer. He came home, but was still kept down with the Bright's disease. He granular tissue sprung up. It was cut out and examined, and he was told it was cancer. He came home, but was still kept down with the Bright's disease. He dragged on for six months or a year, and this thing sprang up again. I cut out a funnel-shaped piece all around it and sent it to a doctor in New York, and he said there was no doubt but it was cancer. He then weighed about 130 pounds, and now will weigh about 230. Most of the cases I have treated thus have done about that way. I believe if we ever get carcinoma under control it will be principally through the nervous system.

DR. PALMER: I believe every member here is obliged for the elucidation, theory and facts given us by Dr. Johnstone. The theory is very plausible; there is undoubtedly considerable fact in it. What is true in the case of General Grant is probably true in many other cases. The nervous condition has much to do with producing cancer. One of the most potent agents we have to control cancer is arsenic; the Fowler's solution is probably the best remedy we possess for the treatment. It has its influence upon the nervous system, and will control the cancer better than any other remedy we can give. It is also a potent, but not safe, remedy to apply topically.

While the paper was being read by Dr. Ricketts there occurred to my mind a means of diagnosis, mentioned years ago, which I think is of value. I am not disposed to discount anything he has

said as to the value of the special senses, sight, taste, touch and smell, or the use of the microscope, which is probably the best of all. But a gentleman in Germany a good many years ago spoke of the reliability of the dilatation produced by the sponge in the diagnosis between hyperlastic induration and the induration from a cancerous growth. The former will yield eventually and be dilated, whereas the latter will not yield, and will remain while the parts around dilate. However, I believe the microscope is the best means we have to determine cancer, and should be used in every case of doubt.

DR. A. B. ISHAM: I came down to-night to listen to the practical paper which has been read upon the early diagnosis of cancer, and not to offer any remarks; but since you were so kind as to call upon me, I may say that we cannot diagnose cancer upon the discharges, or the smell, or the induration of the cervix, because we may have all these conditions from specific disease of the cervix, and of the body of the uterus. There occur to me now three cases in which there was the most offensive smell it is posssble to conceive of, and which in this particular were equal to any cases of cancer I have ever met with, where there was a thickened condition of the cervix from tears due to parturition, where all the varied forms of the discharges met with in cancer were present, and where there was no positive evidence of specific trouble, but simply a suspicion. They were all cured by specific medication.

I think Dr. Johnstone's remarks, in reference to cancer being due to a disturbance of the trophic nerves, are directly to the point, for carcinoma is nothing more than cell proliferation, and where there is an affection of the trophic nerves cell nutrition may run riot. Perhaps we may sometimes find a remedy to control nerve action among the glandular extracts.

In conclusion, I wish to make an inquiry suggested by the paper, and that is whether there is a specific cancer cell, a cell that microscopically admits of no doubt of its being carcinomatous in its nature.

DR. RUFUS B. HALL: I did not expect to speak on this subject. If the theory of our friend Dr. Johnstone is true, how do we account for the large number of cases coming under observation with cancer in various parts of the body, in which the patient has no indication of any marked nervous derangement in any way?. I am not questioning the truth of the theory, but ask this for information. I am not giving special study to this subject, as he is, but while listening to his interesting remarks I can recall many cases of cancer of the uterus and cancer of the breast in which the patient was otherwise in apparent health. And then, again he recited the fact that this followed so frequently after nervous strain or some great mental stress or misfortune. I think the large majority of cases of cancer coming under my observation have occurred in patients without unusual mental strain, anxiety or worry. I do not believe the majority of cases are found in patients who have passed through such anxiety or strain as would make that a factor in the prodnction of disease. I congratulate Dr. Johnstone upon his theory, and hope he will work out a problem that will be of value to us all, but the fact that we occasionally see cancer in these patient I do not think is sufficient to enable us to make that a factor in the diagnosis of cancer. We occasionally do see cancer in these patients. Where the disease is far advanced, we see the patients suffering with nervous manifestations, but do we see it early in the disease so marked as to make it a factor in the production of the disease itself? I don't want to say this in the spirit of criticism, but as a matter of fact coming under my observation, and I would like to ask Dr. Johnstone if he has any explanation why this is so.

DR. JOHNSTONE: The reason is Dr. Hall has not studied his case close enough. What I mean is mental anxiety and worry, and not brain trouble or any manifestation of hysterics, but something that is giving the mind all it can possibly stand. When Dr. Conner first sprung this idea upon me I was like Dr. Hall, and did not think there was much in it. Since then, however, I have not let one of these cases go away from me without a careful questioning, and every one of them have a skeleton. This is true in nearly all of these cases. Now, I did not expect to speak of this, but expected to write a paper on it. While this may not be the correct line, it may lead us on to find something of practical value. Since Dr. Con-

ner called my attention to the universal worry of these people, and he spoke of it as a general surgeon, I have made a practice of winning the confidence of these patients, and in every case I have found a skeleton in the closet worrying the soul out of them.

But there is another thing and that is heredity. How many of these people may inherit this tendency? It was the old idea that cancer was as hereditary as consumption. The heredity of consumption now is found to be only a weakening, by which we cannot fight the bacilli. Some people may stand worry better than others, and others may be comparatively weak. But then on top of it all we may find something else. At one time we thought there was only one Bright's disease; we may yet find that there are a dozen different kinds of cancer. The nerve idea certainly deserves close study. Certainly those fellows in the Himalaya Mountains cannot have much worry, but in those cases there is enough constant irritation to produce it. But you think of an old psoriasis, which goes on year after year, and you would think if anything would kill out the nerve centre it would be that. These cases develop *de novo* almost.

The doctor was asking the present condition of cancer, and what we know about it microscopically. In 1888 I published a paper on the growth of the cancer in the lymphatic cells, which bears directly upon this question. The round cells simply melt together, just as they melt in the formation of bone. You know Miller's idea—but it is too long to give you—regarding the calcification and decalcification, and the laying down of the Haversian system, etc. The round cells, I think, spring from the connective tissues, and wander around and in turn run into the Haversian system. Until then you do not have the complete formation of the cancer nest. The round cells have frequently gone on ahead. They are the robbers that set up the rebellion; they have gotten out in the connective tissue spaces, and there you find it beginning. It is not the cancer but it is this round cell we must get rid of. The key is to get ahead of that round celled invasion, for that is what makes the cancer grow. The nest is as the ashes after the fire has passed.

Dr. Hall: I want to discuss the discussion and not the paper. I still disagree with Dr. Johnstone. For every case of that kind coming under my observation, in which there was a well-marked predisposing cause, at least a half-dozen cases have been under my observation in which there was no such cause. I do not agree with the doctor, but do not oppose the theory.

I want to emphasize one point in Dr. Rickett's paper, and that is the fact that these cases are referred to the operator so often for operation or diagnosis when the patient is beyond any operation—that is, the disease has passed so far that any operation is out of the question. In my paper before the American Association of Obstetricians and Gynecologists last year upon this subject I referred to that point. For each operable case sent in by physicians there are about ten who are past any operation. That has been about the ratio ever since that paper was written. Nearly all the cases have been under observation for months, but the physician in charge, not feeling certain as to the nature of the case, is afraid of making a blunder. Now, that ought to be righted in some way, and ought to be righted by the members of this society. Let the family physicians know that we are not going to criticise them if they refer to us a suspected case of cancer. They are afraid they will be criticised, and it will affect their reputation. Although I am of course, free to say no man would do that, yet it is done.

Dr. Chas. Bonifield: I remember reading in the London *Lancet* or the *British Medical Journal*, a lecture in which this was spoken of, but a fatal objection to it in my mind is that it is not particularly in nervous people we see cancers. If that were the cause, it seemes to me it would be in these slight, nervous women that we would most often find it, but we more frequently find it in the fleshy, phlegmatic people. If you come to put down care, and trouble as the cause for the diseasee you can find it for almost every disease we have to treat. It has been very frequently brought forward as a cause for Bright's disease, and has always seemed to me more truly a cause for that than for cancer. There are very few people but have a skeleton in the closet, and if we question them close enough we will find either a little one or a big one.

Dr. RICKETTS: It seems things go in spurts, even surgery, and at present I have no less than fifteen or twenty cases of cancer under observation, and in the last few days it seems to me every case I have examined has been cancer.

Now, while I hope the time will come when we will have made known to us the true cause of cancer, yet while they are hunting for that cause I propose to be one of the number to advocate the earliest possible diagnosis of cancer of the uterus, on common-sense principles, and urge the earliest possible extirpation of that cancerous nodule. While we have our friends who are ready to theorize, and I will admit they are working on lines that are commendable, yet I have been asked even lately by physicians, "will you tell us how we are to get hold these cases earlier, and when we get hold of them how we are to know they are to be operated upon?" Dr. Johnstone spoke of the women knowing about it. All women cannot be made to diagnose these, and the general practitioners cannot be expected to carry microscopes around in their saddle-bags. As I stated, there are three things given to man that do not cost him much and yet I think they have been overlooked to a great extent; in other words, the cart has been put before the horse, and I feel justified in saying that these cases must be gotten at earlier. In this house to-night there is a patient in whom I propose to extirpate the uterus for prolongation of life and a palliative measure, and for nothing else. The patient is begging for comfort.

In regard to the theory of Dr. Johnstone, I call to mind quite a number of cases of cancer, and while I can recall a number of them who are very nervous subjects, yet I can call up a number of cases in as jolly subjects as I know of, and in which I have been unable to unearth anything to indicate that they had suffered from any depression of any kind. I look at it in this way, that we must get at these women in some way; I do not care whether it comes through the microscope or what, but get them so they will promptly consult their physicians when they have this leucorrhœal discharge followed by the watery discharge, which may be productive of a bad odor, and then I believe we will have made a step in the treatment of cancer such as we have never made heretofore.

The Value of Sugar and the Effect of Smoking on Muscular Work.

As the result of a series of experimental researches in the Physiological Institute, Turin, as to the value of sugar and the effect of smoking on muscular work, Vaughan Harley (*Journ. of Phys.*) has come to the following conclusions: (1) The periods of digestion as well as the kinds of food taken have a marked influence on voluntary muscular energy. (2) Irrespective of the influence of food, there is a periodical diurnal rise and fall in the power of performing muscular work. (3) More work can be done after than before midday. (4) The minimum amount of muscular power is in the morning about 9 A. M., the maximum about 3 in the afternoon. (5) Regular muscular exercise not only increases the size and power of the muscles, but has the effect of markedly delaying the approach of fatigue. (6) The amount of work performed on a diet of sugar alone is almost equal to that obtained on a full diet, fatigue, however, setting in sooner. (7) In fasting, large quantities of sugar (500 g.) can increase the power of doing muscular work during 30 voluntary contractions from 26 to 33 per cent., while the total gain in a day's work may be 61 to 76 per cent., the time before fatigue sets in being also lengthened. (8) The effect of sugar is so great that, when added to a small meal, it can increase the muscular power during 30 contractions from 9 to 12 per cent., while the total increase in work may be from 6 to 39 per cent., the approach of fatigue being at the same time retarded. (9) When added to a large mixed meal, sugar can increase the muscular power of 30 contractions of 2 to 7 per cent., the increase in total work being 8 to 16 per cent., and a marked increase in the resistance to fatigue is shown. (10) Two hundred and fifty grammes of sugar taken in addition to a full diet increases the day's work; the work accomplished during 30 voluntary muscular contractions shows a gain of from 6 to 28 per cent., the total day's work giving an increase of power 9 to 36 per cent., and the time before fatigue sets in being lengthened. (11) Moderate smoking, although it may have a slight influence in diminishing the power of doing voluntary muscular work, neither stops the morning rise nor, when done early in the evening, hinders the evening fall.

CURRENT LITERATURE REVIEWED.

IN CHARGE OF ELLISTON J. MORRIS, M. D., AND SAMUEL M. WILSON, M. D.

IN THE BRITISH MEDICAL JOURNAL

of July 28, 1894, are some

Critical Remarks on Sir Andrew Clark's "Theory and Treatment of Renal Inadequacy,"

by Sir George Johnston, M. D.

The author here tries to show that the condition declared due to an underaching, but seemingly otherwise normal, kidney, is not due primarily to the kidney. There is here a deficiency of solids in the urine, but it appears due to deficient formation of solid urinary constituents, and not to their formation and retention in the blood. In support of this, the statement is made that the slow, powerful heart beat and tense pulse do not occur, as they do when excreta are retained in the blood. The symptoms are credited to deficient oxidation and imperfect digestion, and the author thinks they are best relieved by a combination of vegetable bitters, with or without pepsin and hydrochloric acid. The lessening of the diet is, of course, very important, but it probably acts by allowing a weak stomach to properly dispose of a small amount of food, rather than by offering to the kidneys an amount of urea, etc., so small that they can excrete it.

Dr. Lloyd G. Smith reports

Five Cases of Hydrocele in the Female.

This affection he says is less uncommon than is generally supposed; is frequently painful, but may be unnoticed until an accident calls the attention to it, and is generally mistaken for hernia. The author thinks the only means of differentiating this from hernia is by making traction and tracing the neck of the sac, which will be found smaller than that of a hernia. This is not possible in all cases, of course, and as there is generally pain connected with the tumor; when seen, the author prefers to operate. He makes a linear incision, ties the neck of the sac, shells it out and sews up the wound, usually getting primary union.

Dr. George F. Hill reports a successful case of

Treatment of Diphtheria by Antitoxin.

The patient was three years old, admitted at 2 P. M. with croupy cough and difficult inspiration. The tonsils were somewhat injected and swollen and with a patch of membrane on the right one. Temperature was 102 4°, pulse 140, respiration 32. At 4:30 P.M. an injection of eleven minims of antitoxin (Sherring's) was given, and at 6 P.M. the temperature was 99.2° with some general improvement. The next day, as the child was becoming restless again, eight minims were given at 4:30 P. M., and on the following day the temperature was normal, the symptoms abating, and the child playing, talking, and using solid food. The croupiness persisted until the fourth, and the membrane until the seventh day. The diagnosis was confirmed by cultivations from the membrane. In addition to the injections a thirty minim dose of brandy was given every four hours, a spray of iodine and carbolic acid used twice on the day of admission, and a tent bed with steam used as usual.

Other papers in this issue are "On Death Rates," by Dr. G. H. Fosbroke; "The Personal Factor in Disease," by Dr. Leonard W. Sedgwick; "The Modern Development of the Germ Theory," by Dr. Henry Langley Browne; "The Cycle of Life," by Dr. J. Sidney Turner; "Medical Organization and Remuneration," by Dr. J. McCarthy; "The Spirit of Quackery," by Dr. J. West Walker.

THE AMERICAN JOURNAL OF OBSTETRICS

for July contains an article by Dr. William M. Polk on

The Conservative Surgery of the Female Pelvic Organs,

in which he discusses principally the three conservatisms of the latest date—myomectomy and ligation of the arteries of the uterus in fibroids; curettage and "tamponade" in all forms of endometritis, whether acute or chronic, puerperal or non-puerperal. In regard to myomectomy he enumerates the indications for the operation as follows, naming the conditions in the order of efficiency:

1. It is applicable to uteri which possess only pedunculated tumors.
2. To uteri whose tumors possess well-developed fibrous capsules, and which are neither so large, so numerous, nor so placed as to require in removal such direct damage to the uterus or to its blood supply as will unfit the organ for proper fuuctional activity.

Of the ligation of the broad ligaments of the uterus to check the growth of fibroid disease he says: "The fact that it aims to accomplish a beneficient purpose without the dangers of a more extended operation, and that it appears to fulfill its purpose as well or better than is done by oophorectomy, commends it to us in cases unfitted for myomectomy on the one hand or incapable of withstanding the radical operation on the other. Our knowledge is insufficient at present to permit us to go beyond this statement."

The author is a firm believer in the efficacy of curettage and gauze packing in all forms of endometritis and metritis, whether acute or chronic. "The most striking results are those obtained in the face of the acute septic inflamations of the organ which occur after abortions or labors; but to be of proper service the measure should be properly applied, delay affording opportunity for systemic infection, after which the treatment, though far from useless or dangerous, is of less service." He urges that at the first sign of an outbreak of sepsis following labor or abortion, the physician should forgo his vaginal douches and other expectant measures and boldly enter the uterus and curette and pack with aseptic

gauze. He contends also that the measure is also of great service in the chronic inflammations and states that "whenever in chronic inflammations the uterus is yet enlarged, is yet in the stage of infiltration, this measure is applicable. This brings within its influence many of the so-called cases of recurrent salpingitis and every case where endometritis, and particularly metritis, persists." As to the resection of ovaries that are the seat of simple or blood cysts, he states that in practice one meets with two classes of simple cysts—in one we have one, two, or at most three, cysts, varying in size from that of the ordinary corpora lutea to a dimension several times as great. In the other class we have many small cysts scattered indiscriminately throughout the cortex of the organ. In dealing with the first class of cases and with hematoma he contents himself with free enucleation, bringing the cut edges together with catgut or silk. In the second class of cases he resorts to ignipuncture of all cysts that can be reached, even laying open the ovary by one free incision to get access to cysts buried in the parenchyma.

The author closes his paper with a word on the subject of tubes whose canal is intact and whose ostium abdominale being open, presumably both are. Presupposing that the ovary or a part of it can be left, his rule has been to free such tubes from imprisonment and leave them, treating the associated endometritis by tamponade. When the tube presents itself with closed or partly closed ostium abdominale, and containing but little muco-purulent secretion, the conditions indicating that the closure is of recent date, he opens such tubes at the ostium, cleanses them, and after stitching back the fimbriated rim, thus giving a free opening, leaves them. When the tubes have seemed fit for preservation the adhesions have not been permitted to contraindicate conservatism.

Dr. W. Gill Wylie contributes a paper on

The Best Method of Operating on Old Lacerations of the Perineum, Especially Those Associated with the Formation of a Rectocele and Displacement of the Uterus.

Regarding the perineum as a movable point of attachment for the transversus perinei, the bulbo-cavernosus, the sphincter ani, levator ani, and some of the pelvic fasciæ, and also as the movable point of attachment for the anus and lower end of the rectum and the lower end of the posterior wall of the vagina, the conclusions are:

1. As a rule, when the perineum is completely severed so that the fecal matter escapes passively, the position of the uterus is not affected.

2. The outer or lower part of the perineum may be torn to a considerable extent and the position of the uterus will not be affected.

3. When the inner or upper part of the perineum is torn or overstretched and relaxed, prolapse of the posterior and anterior vaginal walls will take place, and in time the uterus is retroverted, prolapsed, and may be forced out of the pelvis.

4. The explanation is that when that part of the perineum formed by the fibres of the levator ani and the pelvic fascia where they encircle and are attached to the lower end of the vagina or anus, is torn apart, the lower end of the vagina and the upper part of the anus are loosened so that they are not held up and elevated when intra abdominal force is exerted, as in straining at stool; both are forced out through the vaginal outlet, and they pull and drag down the uterus, and in time may result in hernia of the pelvic organ.

5. In operating to restore the parts we should aim to reunite the separated edges of the levator ani and the pelvic fascia, and fix them to and in front of the lower end of the rectum and the upper part of the anus, and thus prevent the fecal matter from forcing forward the anterior wall of the rectum and putting on the stretch the posterior wall of the vagina and in this way displacing the uterus downward and throwing the fundus backward between the utero sacral ligaments, etc.

6. This can be done efficiently only by denuding the retracted tissues on either side of the rectocele and uniting them over and in front of the rectocele. As the most important laceration is within the ostium vagina, to reach these tissues the operation must be within the vagina; and to secure good apposition and to avoid dragging down and adding to the tension, most of the sutures should be passed within the vagina from side to side, so as to unite the edges of the pubo-coccygeus muscle and pelvic fascia in front and over the upper end of the anus and the lower end of the rectum, in such a way as to deflect the fecal matter, as it descends to the lower end of the rectum, back through the anus, and thus effectually prevent the formation of the rectocele with its results on the vagina and the uterus.

7. As a rule, when in an old laceration there is a rectocele with retroversion, etc., there will be found an abnormal condition of the anus and lower end of the rectum. There are nearly always hemorrhoids, fissures, or erosions of the anus or rectum, and not infrequently the sphincter ani is abnormally developed, contracted, and irritable, and on this account it is often necessary to remove these conditions to effect a cure of the case. And it is always best to freely dilate the rectum before sewing up the lacerated vagina.

8. Even where there is complete procidentis, with the cervix or whole uterus out of the vaginal opening, this operation can be made to effect a permanent cure in most cases by combining with it amputation of the cervix uteri, and inserting the sutures so as to shorten up the portion of the stump left in the vagina and, as it were, tie up the upper end of the vagina to the upper part of the cervix uteri at the os internum; or, in those cases where there is retroversion, by doing Alexander's operation to shorten the round ligaments, and thus prevent the long axis of the uterus becoming parallel with the axis of the inferior strait of the pelvis and acting as a wedge to be pushed out, by every effort at stool, through the mouth of the vagina and reproducing the procidentis.

Excluding cases of enlargement from in-

tractable and incurable disease or new growths, the author does not believe in removing the uterus on account of extreme prolapse or procidentia, for, with rare exceptions, they can be cured by the above operations.

The paper is illustrated with cuts, showing the author's method of denudation.

Dr. J. M. Baldy, in an article on

Extirpation of the Uterus in Disease of the Adnexa,

says that " where the womb itself is greatly enlarged, infiltrated, or diseased, it is a proper subject for removal.

Where there is any good reason for believing that this organ will in future become the seat of disease, it may with propriety be extirpated. Where its removal will facilitate an operation or give greater security against hemorrhage, it is justifiable to extirpate the organ.

Except in the presence of malignant or tubercular disease, the womb should never be disturbed if even a portion of one ovary and a Fallopian tube can be preserved. Nor is an operation to be extended to the performance of hysterectomy, where the double ovariotomy will even temporarily answer the purpose, should the patient be in such condition that the prolonged manipulation might render the result of a given case doubtful."

The author advocates the removal of the uterus in disease of the adnexa on account of the number of cases in which the removal of the diseased appendages has not given the relief sought and in which the subsequent removal of the uterus was necessary. He contends that the uterus without the adnexa is not essential or useful. He prefers the abdominal operation to the vaginal.

This issue contains two papers on Rupture of the Uterus. The first by Dr. Charles M. Green, is entitled:

Rupture of the Uterus; Palliative Versus Surgical Treatment.

The author reports two cases treated by palliative measures, both of which recovered. He also presents tabular statements of cases treated by various methods, surgical and palliative. His conclusions are that for purposes of treatment we may divide cases of uterine rupture into three classes :

1. Complete or incomplete tears of the lateral or posterior walls of the lower segment, with adequate provision for the vaginal drainage, with hemorrhage absent or easily controlled, and with no intestinal hernia; such cases will often do well under simple palliation, with natural vaginal drainage, local antisepsis, general supportive treatment, and measures to promote and maintain firm contraction of the uterus.

2. Complete tears of the lower segment, or even moderate tears of the uterine body, with hemorrhage controllable *per vaginam* with gauze pressure or partial suture, where the child has passed through the rent, and where more or less blood clot and liquor amnii, and perhaps also the placenta, have entered the peritoneal cavity ; for this class of cases peritoneal irrigation with weak antiseptics or sterilized salt solution, drainage with iodoform wicking or gauze, combined with general palliative measures, would seem most appropriate.

3. Cases in which delivery of the child through the pelvis is impossible or inexpedient ; in which there is present hemorrhage uncontrollable *per vaginam*; in which the rents in the uterus are extensive, and of irregular, transverse, or ragged character ; for such cases abdominal section is indicated. The propriety of suturing the rents must be decided according to the condition of the uterus and the edges of the tears; when the latter are very ragged and infiltrated with blood, when the uterus is friable and apparently septic, hysterectomy promises better results than suture.

The second paper is by Dr. Malcolm McLean, and is entitled

The Palliative Treatment of Rupture of the Uterus.

The author is of the opinion that instrumental delivery of the child should not be resorted to, but that it should be turned and delivered by the hand alone. He gives as his reason for so advising, that the recession of the head makes the operation with the forceps a very uncertain and dangerous one, the flaccid uterine tissue being easily caught in the instruments and a satisfactory grasp of the head being almost impossible. And when version is resorted to, after an ineffectual and probably disastrous attempt to deliver by the forceps, it becomes a much more grave operation by reason of these previous attempts. If version be performed promptly, and with the hand kept well in contact with the child and not impinging against the uterus, he maintains that it is a safe operation compared with any attempt at delivery with the forceps within the uterus. While the child is quickly yet gently extracted the placenta with its membranes may be readily detached and the whole sac drawn away with its contents which will leave a clear uterine cavity with an uninfected wound of its tissues, which may be left to nature's processes of repair. While the hand is in the uterus it should rapidly, yet with great care, be swept freely along that part of the child which is engaged in, or impacted against, the wound in the uterine wall. The operator should carefully note the following points: (1) the size, location, and other characteristics of the wound itself may be defined; (2) whether there be any escape into the uterus of any intestinal loops; (3) the relation of the child's parts to the wound; (4) whether the placenta be involved in the laceration, and (5) it may be ascertained if the fetal membranes are protruding intact through the wound. If the wound is high up, very irregular and extensive, we can hardly look for repair and should give the patient the benefit of an abdominal operation.

The child may escape through into the peritoneal cavity, and the uterine rent be closed so as to make any attempt at delivery by the vagina improper and impossible.

The author states that in a considerable number of cases of rupture of the uterus a

large hematoma will form, usually beneath the peritoneum, and the extravssated blood will make its way even out to the abdominal parietal tissues, so as to give all the discoloration of extensive ecchymoses on the skin of the side corresponding to the uterine wound. This blood is in due time absorbed and recovery is complete. This subperitoneal collection of blood makes a very serious complication in the operation of laparotomy for uterine rupture. Any attempt to evacuate the effused blood, and to reach and suture the lacerated tissues, is attended with great difficulty and risk to the patient; whereas in those cases where the wound is within the peritoneal cavity, the abdominal section may be the only proper method of treatment.

This author also reports a case of uterine rupture treated by palliative measures where the patient recovered and a year and a half later was delivered of a nine-pound child by podalic version. The cicatrix of the former rupture could be distinctly felt through the thin parietes. The author believes that there is a distinct field for the palliative treatment of rupture of the uterus, as there is also for the operative treatment.

Dr. Edward Reynolds contributes a paper on

The Treatment of Face Presentations,

in which he comes to the following conclusions:

When a face presentation is detected before the engagement of the face, and before rupture of the membranes occurs, there is always reason to hope for a spontaneous restoration of flexion. The obstetrician should therefore confine himself to the adoption of postural treatment and gentle external manipulations till the occurrence of engagement or the rupture of the membranes renders a spoutaneous flexion improbable.

When the membranes rupture early an external or bipolar version should be at once performed, in any case in which the condi tion of the cervix renders a manual dilatation of the os dangerous; but in ordinary conditions of the cervix a manual dilatation should be undertaken immediately after the rupture of the membranes, the head should be flexed by the hand, and the subsequent treatment should be operative, but its details should be dictated by the position.

When the membranes persist until the cervix is completely dilated an anterior position of the chin should be left to nature, so long as its progress is rapid and the fetal heart is steady; but when any irregularity of of the fetal pulse, or an even moderate delay at the brim, has been detected, the patient should be anesthetized and the head flexed.

The posterior position of the occiput so produced should not be left to nature, even though the os has been completely dilated by the membranes, but should always, in such cases, be subjected to an immediate manual flexion.

The anterior position of the vertex which results may then be left to nature or may be delivered by forceps.

In neglected cases in which manual flexion is contraindicated, version should be chosen, if it is practicable, whatever the position of the chin; if version is contraindicated such cases should be treated by the immmediate application of forceps to the face as such, but in the posterior positions of the chin this operation should always be preceded by a rotation of the chin to the front. In cases in which the face presentation is due to some other mechanical obstruction the treatment should be determined by the latter factor.

The abdominal methods of delivery are never indicated in uncomplicated face labor.

Dr. F. H. Davenport discusses the

Ultimate Results of Treatment of Backward Displacements of the Uterus by Pessary,

with especial reference to the Alexander-Adams' operation. The author sums up his opinions as follows:

1. In cases of uncomplicated retroversion or retroflexion of the uterus the choice of treatment lies between shortening of the round ligaments and the wearing of a pessary.

2. A cure, either anatomical and symptomatic, or symptomatic alone, may be confidently expected from the use of a pesssary in about twenty-five per cent. of all cases.

3. Where a cure is effected it is usually within a year or a year and a half after the beginning of treatment.

4. A large proportion of those not cured can wear a pessary without discomfort and do not wish an operation.

5. The operation for shortening the round ligaments should be limited to those cases where a pessary cannot be worn, to those who prefer it to wearing a support for years, to cases where vaginal treatment is inappropriate, and as supplementary to other operations.

The remaining papers in this issue are: "Symphysiotomy Versus the Induction of Premature Labor," by Charles P. Noble, M. D. "Practical Applications of the Principles of Sterilization," by Hunter Robb, M. D. "Intraligamentous and Retroperitoneal Tumors of the Uterus and its Adnexa," by William H. Wathen, M. D. "The Cystoscope," by Howard A. Kelly, M. D.

[The editor regrets that through an oversight on his part the review ol the July number of this magazine should follow that of the August number.—E. J. M.]

Variola and Varicella.

M. Andre Martin relates that two sisters, after travelling from Paris, came to reside in a house where several of the inmates were suffering from varicella. The elder sister at once contracted the affection, whereas the younger, a few days later, showed unmistakable symptoms of variola—namely, confluent pustules, distributed over the whole body, but more marked on the hands and face. Finally, a month later, the father and another sister, who had attended the invalids during their sickness, were seized with varicella. Investigation proved that neither disease existsd epidemically in the town at the time, and that its spread was confined to one house and one family.

PERISCOPE.

IN CHARGE OF WM. E. PARKE, A.M., M. D.

MEDICINE.

The Importance of Menstruation in Determining Mental Irresponsibility.

Krafft-Ebing (*Jahrbuch, fur Psych*, x., 2, 3) reaches the following conclusions on the subject:

(1) It is useful to consider the mental soundness of women during menstruation from a medico-legal point of view.

(2) It is advisable where a woman is held on a criminal charge to ascertain whether the commission of the act coincided with the menstrual period; and by "period" is meant not only the days when there is actual flowing, but those before and after as well.

(3) It is best to advise examination of the mental condition when such coincidence is established. This is indispensable when there is a personal history of neuropathic defect, of mental disturbance at the time of previous menstrual periods, or when the nature of the act reveals any striking features.

(4) When then menstrual process exerts a powerful influence on the mental life of the subject the accused should be given the benefit of extenuating circumstances in the infliction of the penalty, even although there be no proof of menstrual insanity.

(5) When the offence of crime has, in a person whose mind is impaired, occurred during the menstrual period, she must be declared irresponsible, for there is every reason to think the act due to emotional impulse.

(6) But individuals who by reason of menstrual insanity would benefit by acquittal on this ground should be considered as dangerous in the extreme and subjected during the times of the menses to close surveillance. It is best to confine them to any asylum for the insane where they will be comfortably cared for and often cured of this menstrual instability of mind.—*Brooklyn Med. Journal.*

Ice in Phlegmasia Alba Dolens.

Dr. John A. Miller (*Pacific Med. Journal*), in treating on the subject of "milk leg," speaks highly of the efficacy of the cold treatment of the disease. He first used it in 1886, and since then has used it in six cases with uniform and decided success. The procedure was in the following manner: An ordinary large towel was dipped into iced water, wrung out and clapped around the affected limb; a heavy flannel roller bandage was then applied from the toes upward to the groin. On the most painful parts, like the inner aspect of the thigh, the popliteal region and the calf of the leg, were laid rubber bags filled with ice. These were kept in place by a circular binder, independent and outside of the roller bandage. The patient was a little shocked when the cold towel was first applied, but the unpleasantness was only momentary, and then the reaction brought ease and comfort. She desired the ice bags to be renewed quite often at first, as she claimed they relieved the pain, as anything else had never done before: The pain was entirely controlled by the cold. The temperature dropped from 103° to 100° the next day, and the patient commenced to improve, which continued uninterruptedly. The towel was freshly dipped from four to six times in the twenty-four hours. As soon as the patient experienced relief, she was quite anxious to endure the temporary chill from a fresh compress, because the limb always felt better for it afterward. The towels soon become dry and hot, and this gave rise to painful symptoms again.—*St. Louis Med. and Surg. Journal.*

Renal Casts.

Aufrecht (*Centralbl. f. inn. Med.*), discusses the origin of these casts. They must either be due to an exudation from the blood, or be a product of the renal epithelium. In favor of the latter view the following facts are cited: (1) In experiments in which the author tied one ureter, the renal epithelium was seen to contain masses of a hyaline substance which latter subsequently made its way into the lumen of the tubules to form casts (2) Albuminuria may exist without casts. (3(Casts may be present without albuminuria. (4) Casts may be seen in the collecting tubes of a different color, and having such a calibre that would not have allowed them to pass through Henle's loops; the author has shown this undoubtedly local origin in the tubules in the cholera kidney and in scarlatinal nephritis.

Elimination of Phosphates in the Urine in Malarial Fever.

Rem-Picci and Bernasconi (*Il. Policlinico*), find that there is often in malarial infection an increase in the elimination of phosphoric acid during the first twenty-four hours. This they attribute to the increased ingestion of food which is so commonly desired at the onset of the illness. Almost as soon as the temperature has risen distinctly above the normal there is a very notable diminution in the amount of phosphoric acid eliminated, in spite of the fact that the amount of urine passed is generally much increased. This diminution is independent of the amount of food taken, and occurs even if at the beginning of the access a large dose of phosphate of sodium is taken, or the same drug if given by subcutaneous injection. The diminution is not proportional to the degree or duration of the fever. Immediately after the access of fever ceases there is a remarkable "unloading" of phosphoric acid, which continues for several hours, and generally compensates for the retention observed during the febrile paroxysm. If the access is cut short by quinine, phosphaturia is usually observed. In chronic malarial cachexia the elimination of phosphoric acid did not appear to be affected.

Hysterical Apoplexy.

Bischoff (*Wien. Med. Woch.*,) reports a case in a man, aged 28. Some fourteen days after severe mental anxiety, he suddenly became unconscious. On the next morning he regained consciousness, but was found to have complete left hemiplegia and hemianæsthesia including the conjunctiva. He was quite aphasic and innervated his face muscles imperfectly and slowly. There was not race of spasm about the face. On the next day it was noted that the movements of the left eye were considerably limited when the right eye was covered up. He soon began to regain power in the leg. The plantar reflex was absent, and the left knee jerk less than the right. About the seventh day the patient again lapsed into a comatose condition lasting for two hours and a half. Clonic spasm was noted on the next day in the platysma and sterno mastoid muscles. He steadily recovered power, but the anæsthesia and eye symptoms persisted. A temporary weakness in the left arm again appeared, and the contraction of the field of vision became more marked. The patient ultimately recovered almost completely. The author remarks that the involvement of the face and tongue is rare in these cases, and that Charcot's statement that hysterical affections in the face region regularly appear in the form of spasm is not borne out here. The diagnosis was certain on the third day—the left hemiplegia, the deviation of the tongue to the right, the aphasia with perfect power of writing, the hemi-anæsthesia including the mucous membranes, the diminution it the field of vision all pointing to hysteria. The affection of speech in hysteria is mostly mutism; here the patient could phonate, but not articulate. Any anatomico pathological explanation of the eye symptoms was hardly possible. The author maintains that the one-sided lesion was primary, and the unconsciousness secondary, and that it was not an example of hysterical stupor followed by paralysis; nor was it an instance of hysteria complicating organic disease.—*British Medical Journal.*

OBSTETRICS.

The Treatment of Pregnancy Complicated by Heart Disease.

Sears reports the case of a woman, having a double mitral lesion, between three and four months pregnant, who had suffered for several years with alarming symptoms of failure of compensation. After a month's careful treatment the slightest exertion would upset the cardiac balance. He, therefore, reasoning that for a period of five months she would have increased physiological demands upon her heart and at the end of that time would have to meet the tremendous muscular strain of parturition, decided to induce abortion. This was done by dilating the cervix and packing the cervical canal with iodoform gauze. Two days later the packing was removed and the fetus found in the vagina.

Sears, after reviewing the statistics of similar cases in which nature was allowed to take its course, summarizes the following propositions:

(1) That many women with valvular disease, even when situated at the mitral orifice, pass through repeated pregnancies without suspecting that they are victims of such disease.

(2) That as miscarriages are very frequent, and the chances of the child's surviving more than a few years are doubtful, if the mother's condition during pregnancy has been serious the probable fate of the latter should take so much more prominence in deciding the question of abortion.

(3) That the necessity of inducing abortion is very probable if grave symptoms have appeared during the early months or are present with an advancing lesion, or if there is a history of extreme danger in the preceding pregnancy.

(4) That if the necessity for an abortion becomes apparent, the sooner it is done the better, while the fetus is still small and the expulsive force chiefly furnished by the uterus.

(5) That the hope that relief may be given when the case has become desperate by inducing abortion is delusive, as it is possible that it only increases the danger.

(6) That marriage should be forbidden, except perhaps in very unusual cases, to women suffering from cardiac disease.—*University Med. Magazine.*

Ten Reasons Why the Abdominal Bandage Should not be Used After Labor.

1st. It is unnatural.

2d. It is liable to become soiled and hence a harbor for microbes.

3d. It increases irritation of the tired and overworked abdominal organs.

4th. It interferes with the necessity of frequent antiseptic ablutions.

5th. It is difficult to keep in place, unless made to order.

6th. It binds down the weak uterus and promotes the return of a displacement or a sub-involution.

7th. It predisposes to puerperal and cerebro-spinal centers.

8th. It increases rather than diminishes the danger of post-partum hemorrhage.

9th. It prevents digestion, assimilation, and intestinal peristalsis and tends to bladder trouble.

10th. It is unsafe to apply it by any one except the accoucheur or an experienced nurse.—W. B. Conway, in *South Med. Record.*

PATHOLOGY.

The Parasites of Cancer.

Kurloff (*Centralbl. f. Bakt.*) considers it very desirable that those engaged in investigating the supposed organisms of cancer should furnish with each published case the history of the patient, and a clinical and pathologico-anatomical account of the cancer. Seeing that in all these respects cases differ

greatly from each other, it is very probable that the parasites present also vary in different cases. Only by some such plan can we hope to systematise the results arrived at by various investigators. In the present article especial attention is drawn to the organism (*Rhopalocephalus cancerornatosus*) described by Korotneff Kurloff has found what appears to be the same body in a primary cancer of the dorsum of the hand in a male aged 80 years. The supposed parasite lay in a vacuole within the epithelial cell. The tissue was prepared as follows, small pieces were fixed in Flemming's solution and cut in paraffin. Sections were stained in various ways, those treated by safranin being the most successful. The most notable feature of this parasite is its great size; it is readily seen under a magnification of 300 to 400. It presents well-marked pseudopodia, by which movement, with passage from cell to cell, appears to take place. Kurloff is satisfied of the parasitic nature of this body. Establishing itself within the epithelial cell of the carcinoma, it leads to hypertrophy of this cell, which results in the formation of epithelial "nests."

Occurrence of Living Parasites in the Blood and Cancerous Cells in Cases of Carcinoma.

In patients suffering from carcinoma, Kahane (*Centralbl. f. Bakt.*) finds in blood from the fresh growth, and also from the finger tip, minute, irregular, amœboid, highly-refractile bodies, which he regards as parasites. These show very active rotary and progressive movements. The small bodies lie free in the blood stream, and also within the red corpuscles. The movements are kept up for an appreciable time after penetration of the corpuscle. Kahane thinks that further investigation may show morphological and biological points of resemblance between these bodies and the plasmodia of malaria. Examination in the fresh state disclosed similar bodies within the cells of the cancer. The growths examined were epitheliomata situated upon the face, prepuce, and cervix.

Meningitis Complicating Enteric Fever.

Stuhlen (*Berl. klin. Woch.*,) remarks that besides the staphylococcus, streptococcus, and pneumococcus, other micro-organisms may occasionally set up meningitis. He relates the following case in a man whose wife and two children were already seized with enteric fever. After a few days of *malaise* he complained on July 28th of headache, shivering, and constipation. He was admitted three days later. On August 1st there was blood in the stools; stupor, with restlessness and delirium, supervened. On the next day sudden collapse appeared, from which he rallied, but the stupor persisted. On August 4th there was rigidity of the neck, and slight icterus was now observed. He died about the fourteenth day. Besides the lesions in the alimentary canal, there was a purulent cerebro-spinal meningitis. Plate cultures showed colonies having all the characters of those of the typhoid bacillus, and further investigation confirmed this view. The clinical appearances, the existence of enteric fever in the house, and the presence of the typhoid bacillus (in pure culture) in the meningeal pus made the diagnosis certain.—*British Medical Journal.*

Trophic Disturbance in Wasting Palsy.

Prautois and Etienne (*Rev. de Med.*) relate an exceptional case of osseous and articular trophic changes in a man, aged 48, affected with progressive muscular atropy. The disease began some thirteen years ago. On admission, there was atrophy of the muscles of hands and arms. The sterno-mastoid, trapezius, pectorales, infraspinatus, serratus magnus, and neck muscles were affected on both sides. The legs were much less involved. The right arm could not be lifted to the vertical position, and he had great difficulty in raising his head. On the right side the head of the humerus was dislocated upwards, and the sensation of rubbing two rough surfaces together could be obtained here. A large, irregular osteophyte grew from the scapula. There was in addition a bilateral carpo radial subluxation. On the left side the outer end of the clavicle was morbile and and dislocated, and creaking could be felt in the shoulder-joint. The patellar reflexes were present; there were no ankle clonus, pains, or inco-ordination. The reaction of degeneration was present in the affected muscles. The pupil reaction was normal. There was no evidence of previous rheumatic disease, and the articular affection was certainly comparable to that seen in locomotor ataxia. In all probability it was due to a spinal cord lesion similiar to that producing the atrophy, but of hitherto undetermined site.—*British Medical Journal.*

ARMY AND NAVY.

CHANGES IN THE U. S. ARMY FROM AUGUST 17, 1894, to AUGUST 25, 1894.

Leave of absence for two months, to take effect on or about Septemder 1, 1894, is granted Capt. John L. Phillips, Assistant Surgeon.

Leave of absence for three months, to take effect on or about October 1, 1894, is granted, 1st Lieut. Madison M. Brewer, Assistant Surgeon.

Leave of absence for one month, to take effect on being relieved from duty at Fort Supply, O. T. is granted Capt. William H. Corbusier, Assistant Surgeon.

1st. Lieut. William H. Wilson, Assistant Surgeon, will be relieved from temporary duty in the Department of Dakota by the Com'd'g General of that Department when his services are no longer required with troops in the ffeld and will return to his proper station.

Leave of absence for one month with permission to apply for an extension of one month, is granted Capt. Alfred E. Bradley, Assistant Surgeon, U. S. Army.

THE

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ORIGINAL ARTICLES.

CHRISTIAN SCIENCE AND THE MEDICAL PROFESSION AGAIN.

F. C. HERR, M. D., Ottawa, Kansas.

"When the mind is once pleased with certain things it draws all others to consent and go along with them, and though the power and number of instances that make for the contrary are greater yet it either attends not to them, it despises them or else removes them by a distinction with a strong and pernicious prejudice to maintain to the authority of the first choice inviolated. And hence in most cases of superstition as of Astrology, Dreams, Orneus, Judgments, etc., those who find pleasure in such kind of varieties always observe where the event answers but slight and pass by the instances where it fails, which are much the more numerous."—Bacon's Novum Organum.

"Christian Science and Its Relation to the Medical Profession," is the subject of a paper read before the Pennsylvania State Medical Society, and published in The Medical and Surgical Reporter for August 11th. I am glad Dr. Longsdorf read the paper, and gladder still that it was published in The Reporter. Her warning that something must be done with this monster of scientific and religious distortion is timely. Her paper will have served a good purpose if it does nothing more than stimulate thought and investigation into the audacious pretenses of this pernicious and fulsome doctrine.

In this paper I shall endeavor, as far as possible, to take the subject of christian science out of the realm of occult things and bring it within the range of intelligent thought and comprehension.

Christian Science is not a new thing—it is simply a new name for a very old thing. In its phenomena (by which I mean its reputed and actual triumphs in the healing art) it can be traced back to the twilight of fable, and even beyond that dimly remote time, until its argument becomes lost in its very antiquity. But the name is not only new, but seductive and delusive, completely adapted to the highest ends of what may justifiably be characterized as the Black Art. I am well aware that such an imputation is resented by the defenders of this new heresy, but its *modus operandi* to them is not more intelligible than was the medical philosophy of the Rosicrucian physicians who applied the salve to the weapon instead of the wound itself.

The "Dreamers of the Gods" of ages ago, and the "Masters or Guardians of Divine Thought" of the early northern Indians, had as much of an intelligent basis as has our modern "Christian Science." In those distant days such strangely absurd beliefs were not explained and defended by the same dexterous use of language that is now so noticeable. Mrs. Eddy's work is nothing but a lofty pretense at a philosophic exposition of her own introspective mental states, and an attempt to apply her deductions to the universal mind. She has fallen into the same egregious error that has characterized the intellectual flights of the mediæval sophists, who wrote volumes filled with smooth flowing sentences, but in whose volumes a Philadelphia lawyer could not find any trace of reason or sense. With unique skill and consummate finnesse, Mrs. Eddy

plays upon the words fear, dread, sin, sickness, death, spirit, God, etc., but with all her ingenuity and cleverness she fails to break the bolts that bar the realm of mind and bring it within the pale of experimental research. But she is here. Her works are among us. Her votaries are up and doing, zealous and enthusiastic, preaching and spreading the new science. Dr. Longsdorf says "some form of definite action should be taken, whereby we could cope successfully and with dignity with what must otherwise be a dangerous foe."

Against all the audacity and impious assumption of these shameless pretenders we must oppose something. What shall it be? I submit it can be only *light! knowledge! truth! science!*

It will not do for medical men to stand aghast at the achievements of these montebanks. It will not retard their cause, nor accelerate ours, to characterize them as imposters and their work as an imposition. We must proceed along other lines. We must undeceive the people by demonstrating to them that christian scientists possess no power and no knowledge that medical men do not possess. Where is the enlightened physician who cannot cure disease, not all disease, by purely *mental therapeutics?* Here is the "sin" of the medical profession. From time without memory these agencies have been used, sometimes with marvelous effect, and yet doctors condemn, and make strenuous effort to cast upon them disrepute. A doctor should never lift his hat in the presence of such a distorted monster as christian science. Every man in the medical profession (and woman too) can do just what these christian scientists can do. He can do more, for his diagnostic skill endows him with a nicety of discrimination in selecting subjects that the ordinary christian scientist cannot have.

I submit that in our medical schools and medical text-books insufficient attention is given to the *remedia psychia* of Pereira. I submit further that mental influences as a factor in the causation of disease do not receive a tithe of the consideration to which their importance entitles them.

The poet Churchill wrote:—

"The surest road to health, say what they will,
"Is never to suppose we shall be ill;
"Most of those evils we poor mortals know
"From doctors and imagination flow."

This picture of the English poet is overdrawn, and yet every intelligent physician knows that there is more truth than poetry in the verse. Most readers are familiar with the incident which followed a discussion between Erasmus and Sir Thomas Moore on the subject of transubstantiation. Sir Thomas vainly endeavored to convince his friend of the real presence, and assured him that if he would believe he would be convinced beyond a doubt. Upon leaving Moore's house he borrowed his pony, and did not return it, but sent the following lines:—

"Remember you told me
"Believe and you'll see;
"Believe 'tis a body
"And a body 'twill be.
"So should you tire walking
"This hot summer tide,
"Believe your staff's Dobbin
"And straightway you'll ride."

The celebrated Dr. Rush once wrote, "I have frequently prescribed remedies of doubtful efficacy in the critical stage of acute disease, but never till I had worked up my patients with a confidence bordering upon certainty of their probably good effects. The success of this measure has much oftener answered than disappointed my expectations."

In the fifth edition of Flint's Practice of Medicine, page 116, these observations are made: "In the management of cases of disease, mental influences are often of not a little importance. Hopefulness and a strong will are curative agencies which are frequently powerful auxiliaries to remedial remedies, and they are sometimes more potent than drugs. Certain disorders may be produced and prolonged indefinitely by mental causes. A cheerful mien and manners calculated to inspire confidence are to be cultivated as highly useful professional attainments." Dr. Flint in the closing years of his eminently useful life had a keen appreciation of the value of psychical agency in the treatment of disease.

I am quite sure that Dr. Longsdorf makes a grave error when she says that "it (christian science) must not be confounded with hypnotism, animal magnetism, faith or mind cure, spiritualism, clairvoyant or other trance, or the old-time powwowing process." If christian science is not these things we have abundant reason for alarm. We may well then cry out "What shall we do to be saved?" But it is the same old imposter in masquerade dress,

and with an extraordinary adaptation of means to ends, the garb distorts the vision of the subject so that things are not what they seem. The history of christian science, so far, is almost a counterpart of the early history of mesmerism. It is amazing that a learned profession, like medicine, should look with any degree of wonder upon the manifestations of an art that has grown musty with age, and that scientific bodies, time and again, have investigated with always the same result.

The West has suffered from the infection of the christian science craze as it has from chinch bugs and grasshoppers. A few years ago medical men found their paths crossed at almost every turn by this bold pretender. It is not so now, though the creature still moves among us, but with much less of its former strut and bravado.

I remember the heyday of christian science in this community. I recall the case of a young man in whom an empyemic abscess had made a spontaneous opening through the chest wall, and who was advised by the writer to have an operation done as the only means of saving life. Within twenty-four hours a christian scientist intruded her presence upon the unfortunate young man, and, standing in full view of copious issues of pus from the opening in the chest wall with each respiratory effort, assured the poor victim that "nothing ailed him," that "disease was a myth," that he should "go and sin no more by employing a doctor." He went in less than a week. This case did much to place christian science under ban in this community.

This case is illustrative of the point I wish to emphasize, namely, that the good things in christian science, the *remedia psychica* of Pereira, the *mental influence* of Flint, the *psycho-therapeutics* of Tuke, cannot be ignored by the physician who aspires to the fullest measure of success in his profession. Unlike the ignorant christian science pretender, he has the power of discrimination between the cases that can be cured by *psycho-therapeutics*, and those that imperatively need the assistance of art, or the *remedia physica*.

I submit that the enlightened medical man should seldom fail in the successful use of psychical agency in the treatment of disease. This success or failure, however, will turn upon his discriminating judgment in the selection of cases. The case of empyemic abscess just cited is in point, and I may be pardoned citing another case equally in point, though at the other extreme of the pathological state. The patient was a maiden lady, twenty-eight years of age. For eight years she had been an invalid confined to bed. She employed many doctors and had been treated for many maladies, among them uterine displacement, ovaritis, cystitis, nymphomania, masturbation, and, as a *dernier resort*, she had been advised to contract marriage. A very careful examination of this case disclosed the astonishing fact that no organic disease of any moment existed, and I am almost incredulous myself when I recall the fact that a single dose of *psychic* medicine restored the eight-year invalid to health and usefulness. This was a case in which all the drugs in the materia medica would have availed nothing, and one, too, in which christian science only needed the opportunity to achieve a brilliant triumph.

The successes of christian science are no credit to that craft, but they are a distinct reflection upon and discredit to the medical profession. I come back then to the affirmation that enlightened medical men can do all and vastly more than these christian science pretenders can do, provided they use the gifts God has given them, and the means science has furnished them for intelligent discrimination and judicious enlightened treatment.

To scoff at the potency of christian science (?) or *psycho-therapeutics*, because the influence is subtle, unseen and unfelt, is not worthy a philosophic mind. Who would scoff at the dire potency of a drop of hydrocyanic acid because he does not understand its *modus operandi*? And is the one less mysterious than the other? Who can explain either? Both are verities, and in the never ceasing onward march of science both may some day be made clear to our comprehension.

I have already extended this paper beyond the limits prescribed and close with the observation that not a single result of christian science in its relation to the cure, or modification of disease, has any rational explanation outside the pale of *psycho-therapeutics*. The "divine mind" of the christian scientist is a dream, a chimera, a hallucination, precisely as were the "Masters of the Divine Thought" of the early northern Indians.

TREATMENT OF PNEUMONIA.*

W. C. HUMPHRIES, M. D., Acworth, Ga.

In presenting this article on the treatment of pneumonia, I intend only to give a brief *rèsumé* of the line of treatment I have found most successful, and will confine myself mostly to the acute lobar variety.

I live and practice in that portion of the state noted for its salubrious climate, pure water and its being as a rule free from malaria and other morbific emanations with which our friends farther south have to contend. The majority of cases with which we come in contact assume from the beginning the sthenic or high grade type and require active or depleting measures. If called to treat the patient in the first stage of the disease I resort to moderately active catharsis and an agent that will arouse the dormant secretions and assist nature to eliminate from the system the effete products produced by the disease.

For this purpose I find no better remedy than calomel, not only because it meets the indications mentioned above, but also on account of its superior antiphlogistic powers, its defibrinating the blood, its antiseptic properties, etc. I usually prescribe from six to ten grains for an adult, in combination with Dover's powders or some preparation of opium and bismuth subnitrate. I generally compound my own prescriptions, and as a rule divide this into three or four powders, and direct that a powder be given every two hours, best in capsules. If a patient can not swallow the capsules, I mix the powder in a teaspoon with a small amount of sugar or syrup, to which is added water, a sufficient quantity for dilution. After an interval of a few hours, I direct this to be followed with a brisk saline cathartic which empties the alimentary canal and in the majority of cases reduces the fever, lessens the pain, mitigates the excessive amount of congestion in the lung, and adds in many ways to the welfare and comfort of my patient. This prescription, perhaps, is a very old one, yet it is surprising to see how potent it is, in many cases rendering further medication almost unnecessary.

My next effort is directed to reducing the force and frequency of the heart's action, which in most cases of this type is very strong and rapid. The blood vessels in the inflamed lungs are strutted with blood, the lung tissue is turgid and filled with the products of inflammation, causing pain, more or less excessive, and dyspnœa in proportion to the amount of lung tissue involved. The rational treatment, it seems to me, is to reduce the force and frequency of the heart's action. For this purpose I have tried several remedies, such as aconite, gelsemium, the coal tar derivatives, etc., but none of them have given so great satisfaction or such uniform results in my hands as veratrum viride. I use this oftener than any other heart sedative in this disease and it seldom fails me. I do not give it to such an extent as to produce nausea, but in small and often repeated doses. I find that three mimims given every three hours will have as good effect as larger doses, and is not so apt to produce a disturbance of the digestive organs.

With veratrum I combine what I consider one of the sheet-anchors in the treatment of this disease, namely, turpentine in the form of an emulsion. In my opinion, there is not a remedy in our pharmacopœia so potent or productive of good results in this or the vast majority of diseases with which we come in contact, as turpentine. Being a product of our own state, it is plentiful and easily accessible to all, yet it is surprising to see how reluctantly some physicians use it, and what little importance they attach to it. I use it freely, both internally and externally, and find it especielly useful in those conditions where the tongue has a tendency to become dry and red, and the force of the pulse begins to show adynamia. In small doses it prevents gastric and intestinal irritation, assists in keeping the secretions aroused, aids the emunctories of the body, acts as an astringent on the arterioles of the inflamed lung, and soothes the inflamed mucous membrane of the bronchial tubes, assisting nature to throw off the collection of mucus from them.

With veratrum and turpentine I pre-

* Read before the Georgia State Medical Association, April, 1894.

scribe various expectorant mixtures, such as squills, wild cherry, elixir pinus compositus, usually some preparation of opium, etc., varying them from time to time as the symptoms and progress of the disease demand. If the bowels become constipated, a mild purgative should be given occasionally to keep them open, or what, perhaps, is better, repeat the powders mentioned above, especially if the tongue is coated and the cough is tight.

In regard to the use of the coal-tar derivatives which have recently come into vogue, my experience has been rather extensive, and in some cases I prescribe them with marked benefit, while in others with not so much success. In cases complicated with violent headache, especially if neuralgic in character, and pains in the back and extremities, they often act like a charm. In some cases I get a reduction of temperature and free diaphoresis with them; in others I do not. I consider them splendid adjuvants in the treatment of this disease. Of the various preparations I have tried, I have always gained better results from the use of acetanilid.

I will refer briefly to external applications. I have used various forms of liniment containing turpentine, and the one I consider the best is the old-fashioned volatile liniment, composed of equal parts of olive oil, turpentine, and aqua ammonia. Other applications, such as mustard, spongiopilin, hot poultices are very useful and should not be omitted. Of all the external applications I have used so far in the treatment of the sthenic type of this disease, I have found none that gave me so great satisfaction as the application of a large sized blister, and I think the sooner it is applied the better it is for our patient. I am aware that there is a great diversity of opinion on this subject in the profession, and it has been discussed time and again, but a recurrence to it will not be amiss, for it is a subject that demands the attention and earnest investigation of every thinking practitioner.

The present status of the practice of medicine is due to the wide experience and investigation of men who have devoted their lives to the profession and have spent many years in endeavoring to eliminate the wrong and establish the right. To the collation of the experience of such men our profession owes the rapid progress it has made in the last few years. These are the guide-boards that must point us younger members to the road that will ultimately lead us to success. Excuse this slight digression, but I find a tendency with some of our younger practitioners to wander off into theories that have not been sufficiently tried or proven and exclude the bright gems of thought that have been handed to us from the store-house of ripe experience.

At the meeting of the Association in Columbus, the subject of blisters was discussed *pro* and *con* with a great deal of fervor, and especially by one whom we all love and revere for his ripe experience and profound medical knowledge. We know him to be a physician of rare ability and one on whom we can all rely. During the discussion on this subject he said: "If you wish to do me honor when I am dead, say to the coming generations and inscribe on my tombstone, 'Dr. Griggs used to blister in pneumonia.' I am willing to stand the test of time on it until Gabriel blows his horn."

In this same discussion our lamented Dr. R. O. Engram, in answer to the question why he blistered, said: "I blister because it relieves pain, and my experience has been that patients do better with blistering than without it." Several of the older members entered upon this discussion and all seemed to be united upon one thing; to blister, blister well, and repeat if necessary.

I am associated with my uncle, Dr. J. R. Humphries, who has practiced medicine for over thirty years and his advice to me has always been to use blisters in all stages of the disease, the earlier the better, and to use them freely.

I refer to these men not only because of their long and varied experience as physicians, but because they are our next door neighbors and better understand the diseases we treat than those who practice in a different latitude and are not so familiar with them. My own experience with blisters has been very satisfactory, and I have yet to see a case where I used them and regretted it. Of course, they are to be used circumspectly in the very young or very old.

In the second stage of the disease the foregoing plan of treatment is generally carried out, making such additions and changes as necessary. I find it sometimes necessary to commence with some prepar-

ation of ammonia, such as carbonate, which I find to be the best, and also to add alcoholic stimulants if the vital forces show a tendency to weaken.

In the third stage or stage of resolution, the treatment should be supportive, and tonics, reconstituents, etc., should be given according to circumstances and the demands of the system. In those cases that assume the low grade or asthenic form of the disease from the beginning, we must be careful not to carry our depleting measures too far, and to commence our supportive treatment early in the disease. In these cases blisters should be used circumspectly.

In the treatment of pneumonia, as in all diseases which afflict humanity, the physician should not forget the *vis medicatrix naturæ*, and that over-medication in many instances does more harm and retards the patient's recovery longer than would no medicine at all. He should be ever on his guard, willing to accept that which his own experience and that of others teach him is right, and reject that which is wrong, remembering that good common sense and sound judgment are the essentials necessary for success.

THE CONTAGIOUSNESS OF DIPHTHERIA.*

JOHN R. HAMILTON, M. D., Port Dover, Ont.

Two years ago, when reading the reports of this association, I was very much interested in a paper by Dr. Wilson, on cases in practice wherein diphtheria seemed to be carried by a third party, and which evoked much discussion among the members at the time; the majority, I have no doubt, still clinging to the belief that the disease is not communicated in that way. And in this belief we have nearly all rested, although we admitted at all times its epidemic nature, and the theory of direct contagion is, we all know to our sorrow, only too well founded. The untimely deaths of many young physicians, estimable nurses and loving mothers, caused by coming in too close contact with the poison-laden breath of the dying child, attest too clearly this fact. But while we admitted the theory of direct contagion in this disease, I think the majority of medical men have been unanimous, or almost so, in thinking that when asked by friends if the disease was transmitted in the manner that bacteria of other zymotic diseases are transmitted, they felt justified in giving an adverse opinion.

And why should we not cling to this belief when the opinion is endorsed by men of large experience. Squire, of London, says: "I know of no instance of the disease being carried from one house to another by the passage to and fro of those who were themselves unaffected." Bretonneau's theory of direct contagion, and Trousseau's inoculation experiments give nothing to medical literature to warrant belief in the disease being propagated by a third party. Now, we have had many men of large experience to contribute their opinions on diphtheria, one of the longest known and most dreaded of all diseases, its causes, its many and varied types, its paralysis and other sequelæ, its multitudinous therapeutics, many of them very widely different. One author in England, for example, in giving the differential points between scarlet fever and diphtheria, says the latter is found more frequently in rarified atmospheres, in the sandy hills, an Alpine region in fact, whereas we who have practiced for years in the low-lying districts of this Province know the converse to be the fact, and that the drainage of our loamy soils has had effect in extinguishing the disease.

A short time prevous to reading Dr. Wilson's paper in February, 1892, I was called to attend a family in one of the townships, in which a little boy of seven years was prostrated with this disease; afterwards one of the young women of the family was taken with it. The little boy had the asthenic form followed by paralysis to which he succumbed. The young woman recovered. During the time of their illness a relative, the mother of a large family, visited them, remained only a day and returned to her home nine miles distant. Four or five days after-

* Read before the Ontario Medical Association, June, 1894.

wards I was called to attend two of her children, one of whom had already hemorrhage from the throat and nose, and in a few days her whole family of children and the servant girl contracted the disease. There was no diphtheria in the neighborhood of this family either before or after this event, neither had the mother any symptom of the disease.

This case was so striking that I have been watching for corroborative evidence as to this method of propagation. In this country, so far, I only find in addition to Dr. Wilson's testimony, that of the Medical Health Officer for Toronto, for 1892. He says, in an essay before the Provincial Board of Health: "As an example, I may state that an infant living in one of the suburbs of this city was sent away from home where the disease existed for fear of contagion. The baby was successively sent to three families living in remote parts of the city. The baby took no sickness, but diphtheria occurred in all the three houses, two of the infected children dying."

Any contribution to the knowledge we already possess of a disease which, during the past few decades, has done more than any other incidental to childhood to prevent the increase of population, must be welcomed by all workers in the cause of science, as we have yet much to learn as to the causes which may lead to an outbreak of this or any other zymotic disease. After going through a labyrinth of opinions we are glad to reach the vantage ground of a *specific* cause, which we are now supposed to have in the bacillus first discovered by Klebs and afterwards largely experimented with by Loeffler. This is now the generally accepted cause of the disease, as the cultures of these bacilli produced the fever and depression when injected into the circulation of the rabbit, and also the paralysis which we know to be a common sequel of this disease due, no doubt, to the rapid degeneration of the nerve cell or, as Kauffman asserts, to a toxic neuritis. This bacillus, we are given to learn, produces in the tender epithelial mucous membrane of the fauces a ferment which, when absorbed, forms albuminoids by digesting the proteids, thus acting, as do other pathogenic microbes, in producing or rather manufacturing a chemical poison.

The question we, as practical men, appear to have yet to learn is, Does the bacillus of Klebs act at all in such manner as the bacteria of other zymotic diseases, as scarlet fever, small-pox or measles? Will the physician use the same caution when attending diphtheria that he would if he encountered a case of puerperal septicæmia? And does he do his whole duty if he neglects to warn visitors of the danger of contagion by conveying the disease to others unwittingly?

Treatment of Whooping Cough.

Dr. Variol recommends in the treatment of this disease the following formula, of which a dose should be given in the morning, afternoon, and evening in a little sweetened milk:

℞ Potassii Bromidi ....5ii.
Tincturæ Valerianæ.....5ii.
Aquæ.....℥ixss. Misce.

To infants, three teaspoonfuls; to children of from two to five years, three dessertspoonfuls; and to children of from five to ten years, three tablespoonfuls. An hour afterwards he gives the same quantity of the syrup of turpentine. This treatment combines the action of the balsams on bronchial secretion by the turpentine, and of the antispasmodics by the bromide of patassium and valerian. When the *râles* in the lungs are general, he administers powdered ipecacuanha in doses of seven to fifteen grains in the morning to cause expectoration of bronchial mucus. He advises that, where possible, children should live in the open air. To avoid serious broncho-pulmonary trouble in winter, change of climate ought to be secured. They ought to be fed frequently, but with small quantities, rich in albuminoids and easily assimilated (eggs, meat-juice, raw meat). Tonic treatment ought to be conjoined, such as the vinum quininæ, or the syrup of the lactophosphate of lime.—*Lyon Medical.*

Cancer of the Ovary in a Child.

—Gussenbauer (*Wiener Med. Wochenschr*, No. 17, 1894) operated last year on a little girl, aged 8 years. A tumor, double the size of a man's fist, occupied the right half of the abdomen, and had been diagnosticated as a sarcoma or teratoma. It proved to be a carcinoma, and was successfully removed. Half a year after the operation the patient was in good health, and there was no sign of recurrence.

COMMUNICATIONS.

PULSATIONS OF THE AORTA IN THE EPIGASTRIUM OF NERVOUS ORIGIN.*

PROF. POTAIN, PARIS, FRANCE.

We have in the ward Piorry, a female patient who offers a complex picture of symptoms. Profoundly anemic, suffering some time from neurasthenic symptoms, the least work exhausts her, she has points sensitive to pressure in the facial nerves, and the last dorsal and the first two lumbar vertebræ are sensitive to pressure. She does not experience a sensation of weight on the vertex, but suffers from orbital neuralgia. Her digestion is faulty, she has flatulent dyspepsia, pseudo-membranous enteritis, with constipation and a progressive exhaustion of her whole system. Her abdominal organs are movable, especially her right kidney, which descends to the upper crest of the iliac fossa.

But that which most attracts one's attention is a pulsation in her epigastrium, which is very troublesome, and especially so at night, when it robs her of her sleep; it is so violent as to lift one's hand if laid upon her epigastrium. On auscultation, a pronounced diastolic murmur is to be heard. In spite of this her heart is normal, pulsation in the crural vessels is synchronous with that of the heart. A diagnosis of aneurism is not to be made as would have been done in times past, simply because this pulsation and murmur of the abdominal aorta were audible. Neither do I wish to deny that diagnosis of the aneurism of the abdominal portion of the aorta is difficult, particularly when it is situated in the upper portion of that cavity. Stokes has reported a case of a lawyer who suffered from atrocious pains in the epigastrium, and who not only consulted a number of eminent English physicians, but also Andral, in France, who all declared that he was a sufferer from dyspepsia. One day his aortic aneurism burst and he died suddenly.

Aneurism of the aorta was suspected in our case, and search was made for it, for in actual aneurism there are present those characteristic signs, dorsal and epigastric pains, and especially in the lumbar region, which are often terrific and of great extent. They come in crises and cease completely in the intervals. They are aggravated by movement, walking about and pressure. Besides there is dysphagia, dyspepsia and vomiting. A second characteristic series of symptoms is furnished by the abdominal pulsations, but to diagnose an aneurism one should not only bear in mind the intensity of these pulsations for there are aneurisms which are accompanied by very slight pulsation. Thirdly, there is to be heard a murmur which is mostly single and sometimes double. In our patient we actually meet with this triple series of symptoms—pains, pulsations and murmur. But, if we examine these carefully, we shall see that they differ from those associated with aneurism.

The murmur is intense, but it is an artificial murmur produced by pressure exercised by the stethoscope which, partially occluding the artery for the time being, causes the blood to pass through the narrowed lumen, in vibration, and produces a murmur. If you apply your ear directly to the epigastrium you will not hear this souffle. If, at the same time that you listen with the stethoscope, you control the pulse in the femoral arteries, you will remark that there the pulse-wave becomes less and less, to disappear, finally, when the murmur is greatest by pressure of the stethoscope; easily explained, for the greater difficulty the blood current has to encounter in the aorta, the greater the pressure behind. Let us examine the epigastric pulsations. It is known that these may arise from a number of causes; transmission of the heart-beat to the liver and to asystolia. This latter cause can not be considered

* A clinical lecture delivered at the Charité Hospital, Paris.—Translated from *La Gazzetta degli Ospitali*, No. 79, 1894, by F. H. Pritchard, M. D.

for the heart is normal. Then again, there are subjects who present regular nervous contractions of the diaphragm which with marvelous and rhythmic motion may simulate the heart pulsations; but one only has to count them to see that they are less in number than the beats of the heart. Finally, there are certain neurasthenic patients who have pulsations in the epigastrium, but these do not show a tendency to expansion; this is characteristic of these patients and our patient is one of them.

Pulsations of nervous origin have long been known; Hippocrates mentioned them. Lancisi, in recent times, has given an accurate description of them, showing that they are observed in nervous patients, in hypochondriacs, hysterics, and in neurasthenic and exhausted individuals. Laënnec also met with them; and Stokes, finally, described them, having met with them in nervous and dyspeptic patients, and pointed out that they were especially to be observed at the menstrual period and at the beginning of pregnancy. They are especially frequent in nervous subjects.

In our patient the pulsation is not expansile; this may be easily appreciated by pressing the flaccid abdominal walls down upon the aorta which may be felt between the two fingers. It will be seen that its calibre does not vary. The pain is also not that of an aneurism. The pain of which our patient complains is especially nocturnal, a peculiarity which is not observed in aortic aneurism; again, it is not as intense as that of aneurism, where the patients grind their teeth and roll on the floor, with agony. The pain, finally, is epigastric and not dorsal, and though the last dorsal and first two lumbar vertebræ are sensitive to pressure there is not the terrific pain of aneurism. Therefore, in our subject it is purely nervous; she has also, as we before stated, associated neurasthenic symptoms. Besides she presents stigmata of hysteria, anesthesia of the pharynx and analgesia especially of the right side. Yet disturbances of vision are lacking, so that the neurasthenic symptoms are the more conspicuous and we may safely say that she is neurasthenic, with traces of hysteria. These epigastric pulsations are of neurasthenic origin, with no trace of aneurism.

Did these pulsations arise from this disease, neurasthenia? We had remarked that the abdominal organs of our patient were somewhat relaxed; the same holds true of the abdominal aorta, which is moveable and insufficiently fixed at its insertions and along its course; in fact, the vessel is displaceable under the finger.

Now this abnormal mobility of the viscera, in her case, dates back several years to her last confinement and it gives rise in all probability to the dyspepsia which we mentioned before. The question arises how the aorta comes to pulsate so violently while the remaining portions of the arterial system beat normally. Galen, who admitted that the arteries were provided with an expansive force of their own, would have found an easy explanation. To-day, since we know the laws governing circulation, this will not hold. We know that expansion of the arteries is but due to contraction of the heart. But, the pulsation of the arteries does not depend alone upon the mode in which the blood enters the arteries, but also upon the way in which the vessel wall reacts, so that the more that it resists the blood-wave the greater will be the intensity of the beat. Here this mobile aorta resists badly the advancing blood and transmits the violence of the heart impulse to its walls.

Possibly, a slight degree of aortitis might be added to this picture, but this is doubtful. Firstly, abdominal aortitis is very rare. It has been demonstrated to affect the thoracic portion by preference. In necropsies where the abdominal aorta has been found to be affected the thoracic portion has been also found involved. In our subject there are no signs of aortic involvement.

The treatment? Let us confess it at once. Our means of treatment in this affection only too frequently are inactive, and the pulsations will remain for years and years, in spite of all treatment. Yet if they do disappear a favorable prognosis may be given for with them, the other nervous symptoms vanish. Is the neurasthenia dependent upon this enteroptosis? Glenard's disease? I doubt it. Neurasthenia is derived from and dependent upon a number of causes. We shall treat the anemia and nervous symptoms by rest and appropriate diet, which are carried out in a hospital. Other measures we shall reserve till later, when a decided improvement has been obtained.

INCONTINENCE OF URINE IN CHILDREN, TREATED WITH ATROPIA.

[ABSTRACT.]

T. P. SATTERWHITE, M. D., LOUISVILLE, KY.

Incontinence is a malady that is more frequent in boys than girls. It may come on at any period of childhood life, and often continues until puberty, if not relieved. Many persons having the control of such children resort to punishment for a cure; the ignorant, and I regret to say more intelligent people, are often cruel to the little subjects.

It should be the duty of all medical men, whenever they are consulted on this subject, to take especial pains to explain that the trouble is beyond the control of the child, that punishment is not only fruitless, but absolutely cruel, and not infrequently assists in perpetuating the habit.

The causes of incontinence are numerous requiring careful analysis to determine the source. Simple enuresis is purely a nervous trouble. That occurring not only at night but during the day may be caused from some congenital malformation or from reflex trouble. The nocturnal incontinence is far more frequent and less serious than when it occurs both day and night.

Some of the causes that produce this affliction are, atrophy of the bladder, overflow from vesical paralysis, phimosis or adherent prepuce, leucorrhœal discharge in little girls, calculus in the urethra or bladder, an impacted fecal mass in the rectum, the round or thread worm, or any rectal or intestinal irritation; in fact, irritation of the remotest part of the body may cause incontinence. Cystitis will cause loss of control of the bladder and when severe enough there will be no difficulty in determining the cause in this instance. Indigestion is a prolific cause, excessive acidity of the urine frequently an exciting cause. Improper feeding at night or late in the evening may produce gastric disturbance which, by its reflex irritation, causes wetting of the bed. When the cause cannot be discovered our treatment will of course have to be experimental. The general health in all cases should receive our first attention. The disease cannot be cured as long as the digestive apparatus is disturbed. Poor health is a potent factor in maintaining enuresis. The child should have a liberal amount of strictly wholesome food; a very light supper and but little fluid during the evening. If there is hyperacidity of the urine that must be corrected,—we must see that the patient is kept in the best possible general health and remove any reflex trouble that may be discovered.

The treatment by belladonna has been a practice of such long standing that probably every member of this Society can remember when he commenced the practice of medicine, this remedy was recommended and used. Various results have been obtained from its use, but its long continued employment in this trouble shows its usefulness notwithstanding the varied experiences of practitioners. This varied experience is due in my opinion to two causes; first, that the incontinence was not due to a neurosis simply but to a reflex trouble which required surgical interference; second, that the remedy was not pushed to its full physiological effect and continued long enough.

When the smallest physiological dose of atropia is administered the only symptom is dryness of the throat and mouth, possibly some disordered vision. When a larger amount is given this dryness becomes more intense and is associated with redness of the fauces, dilated pupils, disordered vision and possibly diplopia. Often from the first, certainly after a short time, in all cases the heart's beat becomes rapid, and after a large dose of the alkaloid, exceedingly rapid, often accompanied by a peculiar red flush on the face and neck, which may spread over the whole body. In very severe exhibitions of the rash, desquamation of the skin sometimes follows. Intelligence may remain perfect, but there is generally some lightness of head, gidi-d ness and confusion of thought, as well as a staggering gait. Even with doses that are medicinal there are spectral illusions. Drowsiness is not a general or at all char-

acteristic symptom. When a decidedly poisonous dose of belladonna or its alkaloid has been taken, all these symptoms are intensified; sometimes the patients are exceedingly violent and convulsions may appear, followed by stupor and paralysis. Lividity of the face, showing imperfect areation of the blood, is not seen in atropia poisoning, except in a stage of most imminent peril. Death is preceded by marked heart and respiratory failure.

Upon the muscular structure of the heart itself atropia acts as a depressant, but it would have to be taken in very large amounts to be apparent. On the other hand atropia acts, it is claimed, on the cardiac nerve centers as a stimulant, and unless taken in very large amounts does not destroy excitability of these nerves.

Evidence is directly in favor of the fact that atropia in small doses contracts the capillaries, and only when poisonous doses are given do they become dilated. Atropia acts on the peripheral filaments of the nerves, it is mainly eliminated by the kidneys, and its local action on the nerve filaments of the bladder, I have no doubt, is one of the modes of relief for incontinence, when the interior of the bladder is the seat of the trouble. We are all familiar with the local action of belladonna to relieve pain as in myalgia, lumbago, pleurodenia, etc.

In the last eighteen months I have treated five or six cases of nightly incontinence, all of whom responded satisfactorily to the atropia treatment when administered to its full physiological effect. In all my cases I used the metric granules manufactured in Philadelphia, commencing with the $\frac{1}{500}$ of a grain three times per day, increasing the dose gradually for the first two days. After that the increase was more rapid until there were some decided symptoms of distress; even then the dose was continued cautiously and the toxic symptoms would often disappear without decreasing the amount. In only three cases did I have to gradually decrease the dose that was being administered. It is also necessary in the treatment to require the child brought under your daily observation to consider the propriety of increasing, maintaining or decreasing the medicine. I find we cannot intrust to the parent the dose that is to be administered, and it is not improbable the mental effect of visiting the doctor every day is beneficial.

In one case a boy æt. nine years had wetted the bed every night from birth, and seldom less than twice a night. The first dose administered was $\frac{1}{500}$ of a grain; it produced such nausea with vomiting and general redness of the surface, that his parents were alarmed. I decreased the dose slightly for several days; the child that week soiled the bed only three times. The dose was then gradually increased daily with the result, at the end of the second week of a slightly improved record. The dose at the end of the third week had gotten to $\frac{1}{100}$ of a grain three times per day, with the result of additional improvement. The atropia was increased to $\frac{1}{50}$ of a grain before the child was cured. Singularly to state even at this dose, although the pupils were fully dilated, he never complained of his vision or any other unpleasant symptom. Nor did any of the children that I have treated though they played out in the sunlight. I will state with regard to this case that I treated the mother for typhoid fever while she was pregnant with this child. At birth it was fairly well nourished. It was born with a cleft palate and the eyes, as the child developed, showed a want of coördination; its digestion for a bottle-fed child was good. Two nurses were necessary as one was unable to attend it on account of its sleeplessness. I rarely gave it an opiate. Bromide and paraldehyde were given with only partial relief. I then put the child on the hyperphosphate, it immediately acted like an opiate and the child was a good baby from that on.

The second child was eight years of age, a robust, healthy looking boy who had been soiling the bed for five years. He was relieved very promptly and I withdrew the medicine abruptly. The incontinence returned in a few nights and I had to recommence the treatment. The medicine was then gradually withdrawn and the cure was completed.

Reasonable View of the Case.

"Jared" exclaimed Mrs. Strongmind, "come in! You've sat out there on the front porch long enough. If you don't want to get locked out for the night you'd better move yourself!"

"My dear," expostulated Jared, mildly, "as the husband of a woman of your superior attainments and high personal worth don't you think I ought to be treated with a little more respect?"

GUAIACOL IN APPENDICITIS.

J. W. IRWIN, M. D., LOUISVILLE, KY.

On March 24th, I was called to see a girl fifteen years of age, and found her suffering from appendicitis. Her temperature was 104°.5 F. She was complaining of rigors, etc., and had been all the day before; she could not be gotten warm, extremities cold but her axillary temperature was 104°.5; and she was suffering with severe pain in the right iliac fossa, on a line with the anterior superior spinous process of the ilium about four inches toward the median line. There was one spot of tenderness at the point I have indicated, and I diagnosticated appendicitis. The next day there was a well defined tumor, about three inches in length and one and a quarter inches in diameter, extending upward and outward in the region indicated.

The patient had received the day before I saw her (she had been sick twenty-four hours when I was called) two grains of calomel, administered by the mother, and that had been followed a few hours later by a dose of castor oil. Very free purging followed the use of the castor oil, much more than the mother had anticipated. The evacuations were watery and very offensive and contained nothing but fecal matter which had a peculiar odor, very much like that of the evacuations in the latter stages of summer diarrhœa in children. The limbs could be straightened and she could lie flat on the bed without causing any increase of pain. Turning in bed to the left very materially increased the suffering, to the right it eased the pain. I felt certain that the trouble was appendicitis on my first visit. I administered paragoric and saw her again six hours later.

Temperature was still high in the axilla, and the nurse could not get her warm.

I had used guaiacol in typhoid fever, in three cases, applied over the iliac region, and thought I would make use of it in this case to see what effect it would have on the inflammatory process. I directed that fifteen drops of guaiacol should be painted over the seat of the disease, applying it over an area about the size of the palm of the hand. Cotton was applied over this and held in place with a binder. An hour or so later the temperature had fallen one degree. Whether it was from the effect of the guaiacol or a normal defervescence I was unable to determine. During the night her temperature ranged about 103° and in the morning it was 104° F. I then applied twenty drops of guaiacol over the same area without previous washing, and dressings as before. Two hours later the temperature had fallen to 99° F., and the patient was asleep. Her mother remarked to me then: "Doctor, can't I use that application oftener; soon after it was applied it relieved the pain and she fell asleep." Of course this relief may have been due to the paregoric and not to guaiacol. Anyway as the temperature was reduced the patient became very much more comfortable. The application of twenty drops of guaiacol in the morning at nine o'clock, controlled the temperature until seven in the evening, when it rose to 103°.5 F. Another application of guaiacol kept her comfortable through the entire night and the following morning until twelve o'clock. Meantime her temperature ranged between 99° and 103°. Two applications of guaiacol a day controlled the temperature, made her comfortable and relieved the pain. A drachm dose of paregoric was given at night to enable her to rest as she was somewhat nervous.

There was no sweating under the use of guaiacol, and after the reduction of the temperature, the skin remained dry. This is the seventeenth day of her illness, and there has been no elevation of temperature since the thirteenth day. The tumor has decreased in size; the tenderness has diminished under the local applications of guaiacol. Paregoric, an occasional enema, and some salicylate of quinine were the internal remedies. This with rest and a very strict liquid diet was the treatment. I think the patient will now get well without the formation of an abscess.

I saw another case this morning, in a gentleman seventy years of age. The attack is not very severe, he has been sick three days. Indications at first pointed to disease in the right iliac region and there was considerable distension of the colon, but no tumor could be discovered. There was some little doubt as to the nature of

the trouble, and he was thoroughly purged with castor oil in the beginning of the attack. His temperature was 101° F. at night, and from 99.50° to 100° F., in the morning. Pain not very severe.

This morning I saw the case for the first time; there was a large sausage-like tumor in the right iliac fossa, extending from the anterior superior spinous process of the ilium down in the direction of Poupart's ligament. Tender under pressure. The colon was distended with gas, but there was no tenderness in the region of the caecum, which we sometimes find in appendicitis. This case was diagnosticated appendicitis and as the gentleman is quite old with a feeble constitution the probabilities are that an abscess will form and the surgeon will be called in and the usual operation and autopsy will follow.

We did not apply guaiacol in this case because the temperature was not high enough to demand it, but gave him codeia one-half grain, to relieve pain and cause sleep. What the outcome of the case will be of course I do not know, nor do I know that surgical interference will be necessary. We will try to bring about a cure without resorting to surgical measures.

I have looked up the history of appendicitis recently with especial reference to the mortality in cases operated upon and those treated by the medical plan alone, and so far the result in the treatment of appendicitis medicinally is much more successful than where the operation has been resorted to. However in many cases it is probable surgery has not had a fair test. I have no doubt if many cases had been operated upon earlier they would have gotten well. In the extreme stage of the disease after general peritonitis has supervened, recovery is not so likely to follow, therefore the surgeon hardly has had what may be called a fair chance. The mortality after operations in appendicitis, so far as I have been able to collect, is about 45 per cent., while the average mortality after medical treatment is 20 to 27 per cent. The difference, however, may be due to the fact that the surgeon usually receives none but the worst cases to operate upon.

In the last twenty years I have treated at least forty cases of appendicitis; two cases a year would be a very conservative estimate. I have not had a death to occur from this cause. I have had to open abscesses and I have had abscesses to burst in various directions, and some of my patients are permanently crippled. While after the operation results have not been all we would like to see, yet when considered from every point of view, the operation must be regarded as the most rational method of treating appendicitis. The physician stands over these cases in great suspense, as he does not know at what minute perforation may take place and infiltration of the peritoneal cavity may cause general peritonitis and death. If this does not occur, he has to look forward to a recurrence of the disease, especially in the young. I am of the opinion that the time is not far distant when we will be able to reach such a point that the disease will be recognized early, the operation consented to at once, and prompt relief and cure will be obtained.

While I have not the statistics of appendicitis clearly in my mind, I believe males are more subject to the disease than females, in the proportion of 100 to 16. The age at which it is most likely to occur is between twelve and thirty-five years. It may occur in earlier life, and on the other hand, it sometimes attacks older people, as in the case I have just reported. So when I look at these cases in their different aspects, while I am inclined to be conservative, my experience leads me to make this statement, not looking at cases from the standpoint of saving life alone, I am in favor of early operative procedure, as I believe surgery will give better results than any other method of treatment. While the patient may get well without the operation, we cannot say that the disease will not occur again, and knowing this, while he is strong and no damage has been done to adjacent parts, the operation can hardly be any more fatal than exploratory incisions.

Diphtheria and Citric Acid.

Dr. H. Laser (*Hospitals-Tidende*), on account of the destructive influence which citric acid exerts on the micro-organisms of diphtheria, has adopted the following treatment in diphtheria: Each hour let the patient gargle with a dilute solution of citric acid which is prepared by addition of a tablespoonful of a 5 to 10 per cent. solution to a glass of water. Besides, have the child suck slices of lemon or drink a lemonade, which is prepared by squeezing a lemon into a glass of sweetened water.—*Lancet-Clinic.*

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SATURDAY, SEPTEMBER 8, 1894.

EDITORIAL.

PROBLEMS SCIENCE HAS NOT SOLVED.

In the President's Address, recently delivered at Oxford before the BRITISH ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE, Lord Salisbury gave utterence to some words of wisdom which deserve wide circulation and thoughtful consideration. His line of thought is one familiar to every fair-minded scientist in private cogitation, but, as the speaker suggested, it did not follow the precedents usual in addresses of this character. His predecessors, in their annual addresses "had defended science when it was the object of attack, had defied theology when it was the antagonist of inquiry and investigation; and, in later years, had presented annually a bird's-eye view of the field in which they all were working." Lord Salisbury would none of these but gave a clear and able presentation of the limitations of scientific attainment as they appear to a layman who is by education, training and observation fully qualified to form an intelligent and unprejudiced judgment. His theme was "the problems science has not solved, the mysteries it has not penetrated, and the seemingly unfathomable depths its plummet has not sounded."

"The time for controversy is past; for few thinkers are now influenced by the strange idea that religious belief depends on the results of physical research. There is no longer antagonism between theology and science, because the latter has established its position. Nor was it for him to review the victories of science; rather let him set forth what seemed to a layman the fields of knowlege yet unexplored."

The address is a protest against "that mechanical theory of the universe which masquerades under the term evolution," and is a strong aggresive argument developing the conclusion that "undirected evolution is an impossible conception;" that "the argument of design has been too much overlooked," and that "the process of natural selection is only operative as it is guided by a great, directing purpose."

In working up to this main proposition —which may be regarded as the failure of science *scientifically* to demonstrate in the operations of nature, the absence of a free will, above all and controlling all—Lord Salisbury predicates :

"As scientists, we live in a small, bright oasis of knowledge surrounded on all sides

by a vast unexplored region of impenetrable mystery. The most familiar matters furnish the hardest problems. There are sixty-five substances which chemistry regards as elements, but only a third of them are used in the formation of this planet. Another third are useful, but somewhat rare. The other third are curiosities, scattered haphazard over the globe, with no apparent function but to provide occupation for the collector and the chemist. All of these elements seem to have as much relation to each other as the pebbles on a sea beach or the contents of an ancient lumber-room. How did this random collection of dissimilar materials come together? Science does not know. As little does science know of the atom, or of the mysterious ether, which we are told fills all space with its undulations. Least of all does science know life, its essence, its origin, or its operation. This is the great central mystery.

"Life is the unknown force which continues to defy not only our imitation but our scrutiny. Not only is this true of life itself, but the deepest obscurity still hangs over the origin of the infinite variety of the forms of life The Darwinian theory of natural selection is not sufficient to account for this infinite variety, and this inadequacy was never so generally recognized as now. The common ancestry of most if not all species is conceded, for since Agassiz there has been no great defender of the permanency of types. The problem is how this wide divergence of species has been accomplished. What force has been at work? What have been its methods? The Darwinian explanation has never satisfied a considerable number of scientists who are evolutionists, because at least two insuperable objections to it have never been removed. On the other hand, some of the ablest disciples of science are wholly content to explain species by natural selection. But while this wide difference of opinion exists between equally competent authorities, the problem cannot be regarded as solved.

"Lord Kelvin has never been answered since he objected, twenty years ago, 'that the amount of time required by the advocates of the theory for working out the process they had imagined could not be conceded without assuming the existence of a totally different set of natural laws from those with which we are acquainted.' The earth is not old enough, and there has not been time enough since it was possible for life to exist upon it for this divergence of species to work itself out. It is the biologist against the mathematician, the former demanding at least a hundred million years in which to cover that vast distance from the jelly-fish lying on the primeval beach to man as we know him now, and the latter refusing to grant it. The prodigious change requisite to transform the one into the other is made up of a chain of generations, each advancing by a minute variation from the form of its predecessor, and in 3,000 years the variation has not advanced by a single step perceptible to our eyes in respect to man and plants with which we are familiar. The biologists are therefore justified in demanding many hundred million years for the stupendous process. But the mathematicians measure the rate by which the earth is cooling, and deny that organic life could have existed here even one hundred millions of years ago. Between the biologists and mathematicians natural selection hangs suspended in the air.

"Weissman admits that natural selection cannot be demonstrated in detail, nor can it be easily imagined, but that it must be accepted because it 'is the only possible explanation we can conceive.' This admission puts the theory at once in the list of questionable hypotheses, and leaves wide liberty for the search for a more satisfactory one, which one finds in the old theory of design. There is no inconsistency between the doctrine of evolution

or progress by selection, and the mediate or immediate agency of a principle of design. On the contrary, the principle of design is not only wholly scientific, but the most scientific explanation of the great mystery with which he has been dealing."

In conclusion, quoting from "the greatest living master of Science among us, Lord Kelvin," Lord Salisbury finds that "overpoweringly strong proofs of intelligent and benevolent design lie around us, and if ever perplexities, whether metaphysical or scientific, turn us away from them for a time, they come back upon us with irresistible force, showing to us through Nature the influence of a free will, and teaching us that all living things depend on one everlasting Creator and Ruler."

NOTICE.

American Medical Association, Office of Permanent Secretary, 1400 Pine street, Philadelphia.

The Secretary of each Medical Society is earnestly requested to send to the undersigned the following information:

Name of Society——

Officers, with P. O. address——

Time and place of meeting——

W. B. ATKINSON, M. D.,
Secretary.

ABSTRACTS.

MEDICAL EXPERTS IN DAMAGE SUITS.

In a paper by Dr. W. B. Outten, Chicago, Surgeon of the Missouri Pacific Railway, published in *The Railway Surgeon*, on the subject of "Medical Expect Testimony," Dr. Outten says:

The amount of special and peculiar knowledge or skill of the expert is to be determined by the trial judge, and he is oftentimes a very good lawyer, but a very poorly informed person in a medico-legal way. The proof demanded does not generally bear the stamp of much profundity of thought, the statement of the qualification of the expert is usually made by the expert himself. He may qualify himself by proof of his legal right to practice the profession in which he is engaged, or by showing that he is conducting a business, a wide knowledge of which he should, but may not have. To testify as an expert there, is usually no proof either offered or required as to fitness; generally the fact is accepted that the expert has been or is engaged in a business or profession which should give him the required knowledge and experience to qualify him. The question of his actual knowledge is left to be ascertained from his own answers on cross examination. And as before stated the possession of such knowledge and skill—in the medical expert—is presumed in medico-legal cases if the witness is a licensed practitioner. A legalized or licensed practitioner in our country, particularly in some western states, means merely a self-imposed or authorized prefix to a name to constitute a full-fledged physician.

I was once informed by a medical student who had failed to pass the final examination at a medical college that he was now a legal practitioner, that he had passed a satisfactory examination before a local board of examiners in a neighboring state. Upon inquiry I elicited the fact that the local or country board in the country in which he was practicing consisted of a blacksmith, a barkeeper and a justice of the peace and as our informant expressed it that there was "not much medicine in the crowd, but a good deal of muscle and whisky." Again in some states no qualification whatever is exacted, while again in others a limited period of time as an inhabitant of that state constitutes a legalized practitioner. In order to demonstrate the utter and complete inutility at times of the term "legalized practitioner" a few illustrations will not be out of place.

A passenger on a railway train by the overturning of a coach sustained severe contusions about the back extending from the shoulders to the buttocks, together with a fracture near the left wrist and a contusion of the right ankle joint. In

describing his injuries he said: "My left leg was broken, shivered I think, my left arm broken, and also my right collar bone, my back and sides bruised, and a plug cut out of my lip," and sued accordingly. Immediately after the injury he walked without assistance a distance of six hundred yards, transacted business, boarded a train and rode one hundred miles, and then drove in a wagon five miles into the country. At no time from the moment of the accident to the date of the trial was he unable to walk. He went to another state and there a doctor treated the fractured wrist with brown-paper and vinegar, which was all the medical treatment the injured man received. In the deposition of this doctor who had qualified as an expert occurs the following:—Q. "How long have you been practicing medicine?" A. "For the past thirty years." Q. "Where did you graduate?" A. "I never graduated, don't see any use in it." Q. "How many bones have we in the wrist, Doctor?" A. "Only one." Q. "What is that bone called?" A. "The nuptial bone." Q. "How many bones have we in the forearm?" A. "One." Q. "What do you call it?" A. "The meridian bone." Q. "How many bones have we in the thigh?" A. "One bone." Q. "What do you call that? A. "Call it curb bone." Q. "Are you not in error both as to the number and names of these bones. Have we not eight bones in the wrist joint, not to speak of the racius and the ulna, which form the articulation of the joint?" A. "That mought be, but during the war my books got burnt, and I hain't had any since."

Another illustration in the same case: The expert in wit perhaps, if not in knowledge in the matter in issue, who appeared to find most favor in the eyes of jury, answers as follows: Q. "Are you a surgeon?" A. "Yes, sir." Q. "Is it necessary for a surgeon to understand anatomy?" A. Yes, sir." Q. "How long is the spinal cord?" A. "I don't know." Q. "Where does it begin and where terminate?" A. "I don't know." Q. "How much does it weigh?" A. "I don't know." The attorney becoming annoyed at the nonchalance with which the doctor confessed his ignorance asked with some asperity: Does it run up and down, crosswise, diagonally, or how?" The doctor winked at the jury and answered—"I think so." The attorney, changing tactics, in the blandest tone asked: "Doctor, you claim, I believe, to be a good surgeon and a good anatomist?" A. Yes, sir. Q. "What is the flexor accesores seu massa carnei Jacopis Sylvii? The doctor said quickly "I declare I don't know unless it is an inquisitive lawyer." And still the verdict was for a good amount.

Again upon one occasion a legalized practitioner was testifying as an expert in a case where a lady passenger upon a railway train had been injured, and in the course of his examination boldly declared that a retroverted womb with existent adhesions had been caused by the accident, when it had been proven that this condition had existed some years prior to the accident. In the process of cross-examination the doctor indicated much ignorance and confusion as regards his views of versions and flexions of the womb, and finally asked in what condition he found the lady's prostate gland. He very gravely answered that it had not fallen yet, but there were very serious doubts about its remaining in its normal position. Thus it may seen that while a qualified practitioner under law constitutes an essential basis of the expert yet in reality it oftentimes is the reverse.

It is a fact noted not only by attorneys of experience but by others attendant upon court that experts are more frequently selected not because they are especially well qualified or most competent to form a correct judgment but because their opinions are known to be favorable to the cause of the litigant at whose instance they appear in court. It is unfortunate, but the natural trend of most men is in the direction of partisanship, and equally unfortunate that the medical expert is very rarely surperior to this trait. In fact it comes very near to being characteristic, and in our experience specialties in medicine seem to strangely influence this course. The testimony of an expert is for the most part not given from the witness' own examination and estimate of the material fact but upon hypothetical cases which are supposed to embody the facts in evidence in the cause, but which confessedly may not embody all the facts material to the formation of a correct judgment. The hypothetical case is framed by one versed in law, and not medicine is built upon a theory in law, and as before stated oftentimes but poorly represents the true issue in fact.—*Railway A*

THE PHYSICAL BASIS OF KNOWLEDGE.

The surface of the brain has many centers upon it, whose functions have been carefully studied. In addition to these centers, there are tracts of nerve matter connecting them with each other, so that associated or concerted acting of the brain centers becomes possible—indeed, is of constant occurrence. One hears the word "rose" spoken, and immediately the image of a rose is recalled; there is a recollection of its odor, of its color, of its size and shape, and a stimulus goes to the proper center, so that the word "rose" may be spoken or written, if it is so willed. It is these tracts or paths of nerve matter that enable the bran to build up our complex ideas. It will be seen from what has been said that the word "rose" carries with it many elements, such as color and shape, learned by experience through the eyes; taste, by the tongue; odor, by the nose; weight, by the hands. But all these qualities of taste, color, odor, weight, etc., go to make up our complex idea of what a rose is. These varied primary or elemental ideas have reached the brain by separate channels, have formed memory pictures on the centers, which, in turn have become associated by means of the inter-central nerve paths into complex ideas.

In addition to the impressions reaching the brain through the nerves of hearing, sight, taste and olfaction, there is a constant stream of sensations pouring into the brain along the nerves of feeling. It has now been pretty well settled that some of the nerve fibres conduct sensations of heat, others of cold, some of pain and still others that sensation known as muscular effort, or the muscular sense. All these are carried to different parts of the brain and there registered. From this registry, they can be called up as a memory of past experiences. It will now be clear that there a constant stream of sensory currents or sensations coming into the brain from all parts of our bodies. These sensations have their mental accompaniment. When a current escapes from the brain, and goes outward for the purpose of moving some muscle or group of muscles there is also a mental accompaniment. It is in this way that we are aware of how we are acting and being acted upon. These constitute states of consciousness. The conscious personality, or conscious ego, is the sum of all the states of consciousness at one time existing.

In a moment, by disease or injury, a man may lose the power to speak, and yet be able to read and write; or he may be unable to read, and yet hear what is said. Some may have the center of hearing so damaged that the power for music is gone and still be sound in every other respect. Some, again, may lose the power of recalling words. They know them when written or printed; but they cannot speak, because they cannot recall the words needed to express their thoughts. Enough has been said to show that the brain and all the nerve tracts leading to it and from it are the physical basis of knowledge. Derangement in these is followed by derangement in the mental powers. Insanity is only diverse, affecting the brain so as to derange and pervert the thoughts, language and actions of the person. This view of insanity has done much good, as it has led to a better method of dealing with insane people. The anatomical and physiological study of the brain shows that it is the organ of the mind; but further observations made in cases of disease and injury of the brain as well as on cases of insanity, go to establish this doctrine beyond all dispute. Illusions, hallucinations and delusions owe their origin to some derangement in the sense organs or in the perceptive centers in the brain. Following upon this, the conscious ego is no longer in its true relationship to its environments, and there is, as a consequence, derangement of conduct, as the result of the physical disease.—*Canadian Mag.*

Benzoate of Sodium.

The combination of borate of soda and benzoic acid is extremely beneficial in various forms of kidney and bladder difficulty. Perhaps the most advantageous results are obtained when there is an excess of insoluble urates or of uric acid; the urates are at once converted into soluble, harmless, easily eliminated hippurates.

In high specific gravity of the urine, excessive urea in lithæmia, in lithæmic albuminuria, and renal hyperæmia resulting from these conditions, the mixture is exceedingly serviceable.

NOISES IN THE HEAD AND EARS.

Dr. Barclay, Aural Surgeon to the St. Louis Baptist Hospital, in the *Hospital Bulletin*, (May, 1894,) writes:—The question is frequently asked "What are 'Noises in the Head and Ears' and what is their signification?"

A satisfactory answer can perhaps be deduced from the following discussion;

Aerial sound-waves, reaching the healthy ear with sufficient force, impart that force to the movable tissues lying between the outer air and the auditory nerve filaments in the labyrinth where tissue vibrations are transformed into nervous stimuli, these stimuli being thence conveyed to the auditory centre in the brain, where they are interpreted, by consciousness, as sound.

The movable tissues spoken of above, by whose operation the force of aerial sound-waves is transmitted to the terminal filaments of the auditory nerve, constitute an apparatus which is generally termed the "transmitting-mechanism" of the ear. This transmitting-mechanism moves, if at all, as a solid body, in response to the impact of sound-waves; and may therefore, so far as its obedience to the force of sound-waves is concerned, be considered a mechanical unit, a vibratory lever, as it were. This vibratory lever, so to speak, is, normally, so nicely adjusted and related to the parts with which it is in contract or connected, that, however numerous and complicated its attachments, contacts, or connections, however complex its pivot or fulcrum, mechanically, and whatever the nature of its equilibrium, it may be looked upon as constituting with other parts a balance whose tension with those parts preserves a certain equilibrium. Now the transmitting mechanism of the ear is so constructed that aerial sound-waves act more directly and more effectively upon one end of this balance than upon the other, thus disturbing the relation between all parts of the transmitting-mechanism and the other portion of the balance—moving the balance upon its pivot, as it were, and the fluid in the labyrinth, thus disturbing the terminal filaments of the auditory nerve (which are at rest when the balance is at rest), and inducing a sensation of sound at the auditory centre.

On the other hand, tissue sound-waves, generated within the head in performance of the physiological fnnctions of phonation, respiration, circulation, mastication and deglutition, or transferred to the head by contact with musical instruments, tuning-forks, etc., act upon the healthy ear as force exerted upon the fulcrum only, or, simultaneously, upon all parts of a balance, producing but little if any disturbance of the balance as such, nor disturbing the relation hitherto existing between the transmitting-mechanism and the contiguous parts in the labyrinth, but pass out over the bridge of ossicles and drum-head as force is transmitted through a straight line of touching billiard-balls, without their appreciable disturbance, to be discharged at the last ball.

If however the exit of such sound-waves is obstructed by any condition of a mechanical nature, the waves rebound with a force proportional to the degree of obstruction; and disturb the relation between the deeper-lying parts of the transmitting-mechanism and the tissues enclosing them, displacing the auditory nerve filaments and inducing a sensation of sound.

It should be borne in mind that the presence of any adventitious substance in the auditory canal—whether excess of cerumen, a verruca, exostosis, wad of cotton, "foreign body" or what-not—will, so far as it obstruct the exit of sound-waves, cause them to rebound, with force frequently sufficient to drive the echo back again through the tansmittiug-mechanism to the nervous apparatus. If the lumen of the canal be closely stopped with the finger, cerumen, or other obstacle, the echo is rendered more forcible, not only by the completness of the barrier from which it has rebounded, but through reinforcement from the drum-head, which acts as an additional barrier in that its excursion is abridged by the compression of the air shut up in the auditory canal. The same thing obtains where the tympanum contains liquid; when the Lumen Eustachian tube is obstructed or closed; or when other conditions exist, preventing excursion of the drum-head to a normally accommodating degree. When the foreign-body, cerumen, or other substance, rests directly against the drum-head, the ex cursion of the membrane is still more

effectually prevented, and the echo is the more forcible.

Whatever condition arises to disturb the normal equilibrium, the balance, as it were, of tension between the transmitting-mechanism and the parts with which it is in contact or connected, will more or less bind down one end of the balance, change the position of the fulcrum relative to the lever, so to speak, and render less effective sound-waves from without, more effective those from within the tissues of the head, in their operation upon the terminal filaments of the auditory nerve.

The signification of Noises in the Head and Ears, then, is that of a disturbance of the normal equilibrium or balance of tension between the aural transmitting-mechanism and the parts with which it is in contact or connected.

HYPODERMIC INJECTIONS OF STRYCHNINE AND ATROPINE IN THE LIQUOR HABIT.

Dr. G. W. Bath, of Ohio, Ill, in the *Clinique*, says:—Two years ago I began giving treatmnet for the Liquor Habit. I reported 8 cases in the fall of '92. Since then I have had several letters from different parts of the country making inquiries about the treatment and the patients. It is with a view of answering these inquiries as well as making a final report that I write this paper.

The patients are all residents of this town and vicinity; so I have been able to see them nearly every day since they took treatment.

Concerning the efficacy of the treatment, I have this to say;—that it is a cure so far as the treatment of any disease is a cure. Indeed I think it just as sure as a surgical operation or the treatment of malaria or syphilis. Strychnine is the drug upon which I rely.

The form commonly used is the tablets of the nitrate one-fortieth gr. The strychnine is combined with atropine sulphate in quantities to suit; beginning with an injection of one-fortieth gr. of strychnine and from one two-hundredth to one one-hundred and fiftieth gr. of atropine; using the injections from two to four times per diem, according as the patient requires, and increasing the strychnine during the first week, until by the beginning of the second week the patient receives from one-eighth to one-fourth gr. each day.

The atropine is likewise increased to its full physiological extent, producing the dryness of the mouth and fauces and blurred vision. It is well to bear in mind that strychnine can be tolerated to a remarkable degree as reports on the treatment of asthma and various neuroses show. At the end of the second week the doses must be decreased until the end is reached with about what was originally given.

After two to four days if the patient is drinking his desire for liquor will cease. Drinking and food taste badly. This is undoubtedly due to the fact that the secretions are charged with the drugs: some nausea will likely be experienced even to the extent of vomiting, especially if the patient persists in drinking. The atropine is liable to cause nausea when giving freely. Yet contrary to some authorities I think the strychnine capable sometimes of doing the same. In experiments with strychnine which I conducted upon myself, I found that when I attempted to move about the limbs stiffened; I felt my heart beats decidedly strengthen and had that sea-sick smile termed the "risus sardonicus" but I became violently nauseated and vomited several times. I am told that at the "institutes" if the patient persists in drinking beyond 3 or 4 days and still craves it, he is given an injection called the "barber pole" because of the various colored liquids used in its composition. He is then handed a big drink and is told to go out and sit down. In a few minutes he feels that certain products will likely have a rise. He is not mistaken either, for up it comes. The "barber-pole" is nothing more or less than apomorphine which being a systemic and prompt emetic makes the patient believe that he can no longer bear whisky so he usually, after that, leaves it alone. I have never had occasion to use the apomorphine in this connection, finding that plenty of strychnine and atropine does the work.

The injections should be continued over a period of at least three weeks, during

which time the patient will have received from forty-five to ninety injections. It is well to give as an aid to the hypodermic treatment some tonic mixture as nux vomica, digitalis with tincture of capsicum, if necessary; or some of the ordinary bitter tonics might answer, the entire idea of the treatment being to keep the system thoroughly saturated with the drugs, using such agents as best favor reconstruction of the nerve tissue and the elimination of the waste products. I consider atropine an eliminant of considerable virtue. By contracting the arterioles and thus increasing the blood pressure, the quantity of urine voided is much larger. The tonic action of strychnine upon the unstriped muscular fiber causes increased peristalsis and copious evacuations of the bowels result—although atropine alone when given for a period causes an increase of the stool.

Concerning the best time to treat the patients: I fancy the results have been more prompt when the patient has been drinking freely. I usually allow the patient to drink until he is tired of it. He generally quits of his own accord. But if one found it necessary an injection of the apomorphine could be used, to produce the impression that liquor was no longer borne and would vomit the patient if it were taken. Now, to speak of the results with my patients. It has been all any one could ask. I have treated three others aside from those named in the article referred to with the same satisfactory results. The second case given as D. H., took to drinking in about four months after treatment although thoroughly cured. He was like the poor dog Tray, who fell into bad company. His old chums actually poured liquor down him. The poor fellow was beset with all manner of temptations and finally succumbed to the old habit.

I am reliably told that he made poor business of it. That the whiskey made him quite sick. I am happy to add that within the last week he has resolved to give himself another chance and live a sober life, and I have begun the treatment for the second time with him. All the other cases except one have remained "cured." They enjoy good health, are successful in business, have neither become crazy nor impotent. Although daily were drink can be had, they say they have no desire for it.

In conclusion the most important point is the

MORAL.

My experience has been somewhat dearly bought. In this little town with three saloons I have encurred the enmity of the saloon men and their friends. One case which I foolishly undertook to treat about one year ago, was of a man who was the most complete specimen of a drunkard I ever saw. For several years he had never drawn a sober breath. He had all the advanced symptons of total inebriety; swollen skin, yellow conjunctiva, shambling gait, loss of memory, incoördinate speech and gastric catarrh. Besides, he had suffered from delirium tremens frequently. In such a state was he when I undertook his case. I began his treatment on Saturday night and by the following Monday night he had no further use of my service—in plain words he was *dead*. He died in one of the worst spells of delirium I ever saw. I had given this patient but three injections of one-eightieth gr. strychnine each. But it became a favorite fling of the "bummer class" that I had killed him, and the news of his death was carried from Dan to Bersheba. The moral from that case was always to inform the family that no risk will be assumed; and then if the patient dies during the treatment one incurs no responsibility. But wiser still I think it very risky when one is so far gone to ever attempt the case. One will be better off in every respect without such patients.

Another thing is the social standing of the patient. If the patient is a man of a family the chances for his continuance are much better. It is known that a great per cent. of drinkers are started in their career through lack of proper associations. They become accustomed to resort to the saloon to loaf and chat, and from that the road to drunkenness and vice is not difficult. So a great menace to the success of the treatment of the patient is, what can be done for him after he is reformed? A man must have more than ordinary stamina to reform his social life after he is cured of drink. Hence the great number of those who go back to their cups are those whose only acquaintances are old chums of the bowl. In

their reformed state they are like Robinson Cruso on his island; and rather than endure this social isolation and taunts of their old companions they go back to drinking again.

Still another point necessary to bear in mind. It is necessary to impress upon the patient that a hypodermic injection will not make a reformation in him unless he is willing to help himself. He must be positively forbidden to lounge about the saloons simply that he may know whether or not his appetite is gone. Too many people expect to have somewhat of a miraculous nature in it. Not so at all. A man can certainly acquire a taste for drink in spite of the treatment if he persists in trying. The physician should also never attempt to treat a patient without his fullest consent and coöperation. If simply at the solicitation of his friends one treats him without his knowing what the treatment is for, the chance is good for a grand failure. The patient must realize that if he is to take treatment it must be a matter of sufficient importance to him that he be completely under control. No hop, skip and jump matter, but one of serious business.

So much for the treatment.

But the physician's place should not simply be that of curing the drunkard. He should take stand as a public educator on the evil influence of alcohol. I say it without fear of contradiction that in the great majority of instances where liquors are prescribed, the patient would be much better off without them, and the physician would not be considered in the class of those "fellows who prescribed a little brandy for this complaint and a little beer for that." As a scientific man he should be above such shallow quackery and lend his aid to putting down this gigantic evil which largely underlies many of the moral corruptions of all lands. When scientific men get somewhat over the microbe craze they will still find sufficient work to expend their energies upon in trying to save our nation from the 100,000 deaths annually occurring through strong drink.

SOCIETY REPORTS.

THE LOUISVILLE CLINICAL SOCIETY.

April 10, 1894.

[STENOGRAPHICALLY REPORTED BY C. C. MAPES.]

POLYPUS OF LUSCHKA'S TONSIL.

DR. WM. CHEATHAM: This specimen was shown at the Surgical Society last night, and I only present it before this Society because in an examination of the patient to-day I have discovered that it is a rather unusual growth, or springing from an unusual locality. When I removed the growth yesterday I supposed it sprang from one of the turbinated bones, hanging down from the post-nasal space into the pharynx—a mucous polyp, but the bleeding was so free that I could not discover its exact origin at the time of removal. In making another examination of the patient to-day I found that the growth had its origin in what is known as Luschka's tonsil, left side. In looking over McKenzie's work I find he refers to only two cases of pedunculated growths of the pharynx. That being the case it makes this polyp springing from that location very rare. It had undergone cystic degeneration; of course it collapsed as soon as punctured and is now only about one-third the size it presented when removed. This patient came from the country and gave the history of a peculiar sensation in the throat; that whenever she attempted to swallow it felt like she "was swallowing her own head." Soft mucous polypi of the post-nasal space originating in the nose are not very unusual; in their removal not much local anaesthesia is necessary, as the pressure of the growth produces a condition of semi-anæsthesia of the parts, so that traction can be made on the soft palate and the growth can be removed by the use of a very little cocaine. This growth was removed in the following manner: A weak solution of cocaine was sprayed into the

left nostril for anæsthesia and to shrink the turbinated tissue to enable me to pass a soft catheter through the nostril and out of the mouth, to tie the soft palate forward; to the end of the catheter I tied a string—silk thread—passing it through the nose and out of the mouth. After getting it through the nose and mouth, I cut the thread from the end of the catheter and tied the catheter firmly over the upper lip. I then took a Douglas snare with wire in canula and attached the end of the string which was in the nose to the loop of wire and pulled the wire and canula through the nose, and the loop into the post-nasal space and pharynx. With a velsellum the polyp was drawn through the loop, the polyp having undergone cystic degeneration, ruptured; in endeavoring to tighten the wire around the growth, the latter came loose. The snare I used and which I exhibit here, is one of the best for such operations, I know of. You will observe that the heavy handle can be detached and reattached with no trouble. Should the growth to be removed have undergone fibroid degeneration, thus making the operation more difficult, and increasing the danger of hemorrhage, it is of much more consequence, especially when the cold wire is used, to cut slow, to rest the patient often, and thus to avoid hemorrhage. While your patient is resting this heavy handle can be removed and easily reattached when you wish to continue the operation; with this screw as much force can be applied as with any snare. As I before stated the screw did not have to be used, not even the handle attached; when the growth came away, hemorrhage was not great, but enough to interfere with good visual inspection, and as the patient was much wearied I made no further examination that day. The next day I located the origin of the growth, as I stated before, from the left side of the pharyngeal tonsil; the stump was cauterized with chronic acid. While on the floor I wish to refer to the soft rubber catheter as a means of plugging the post nose. Still better is a small copper wire as shown here. This will go through noses through which the catheter will not pass. It is also cleaner and can be thrown away after using once. However, nasal plugging is but seldom necessary now. The bleeding point is usually on the anterior half of septum, and can be usually seen and cauterized.

DISCUSSION

DR. J. W. IRWIN: I was very much interested in Dr. Cheatham's account of removal of the nasal polyp, but more especially in regard to his statement that it is not necessary any longer to plug the nose in epistaxis. I wish particularly to ask the doctor what to do in some cases that come under the observation of the general practitioner, in inebriates, in bleeders, in those suffering from malaria-hemorrhagica, and disorders which terminate speedily in death unless some measure of this kind can be instituted, until constitutional remedies take effect. I have had the misfortune to see three deaths occur from epistaxis, two in inebriates and one in a bleeder, and also came very near losing four cases of malarial hemorrhage from the nose, and believe that death would have occurred if it had not been for plugging the posterior nares. I certainly would have lost one case because I could not get the patient early under the effect of quinine. In such cases I would like to know if Dr. Cheatham will suggest a remedy that would do away with the necessity of plugging the nares, and making the patient feel very uncomfortable?

DR. WM. CHEATHAM: In answer to Dr. Irwin's question: In a large majority if not all these cases, the bleeding is from the septum and not from the turbinated bones as stated by the older authorities.

In a large majority of cases you can wash out the nose, locate the bleeding point and cauterize it. I remember a case not long ago occurring in the practice of another physician where a lady had excessive nasal hemorrhage and the physician had plugged both the anterior and posterior nares. I removed all the plugs, thoroughly washed out the nose, located the bleeding point on the septum, and with a pair of ciliary forceps which I happened to have in my pocket, I attached a piece of cork to each blade of the forceps and passed one blade in each nostril put one piece of cork against the bleeding point, took a strong cord and passed it around the blades of the forceps bringing them firmly together, and the patient had no further hemorrhage. Nasal breathing was not interfered with at all, as these pieces of cork did not obstruct the passage, and the patient was much more comfortable than with both the posterior and anterior nares plugged. The danger of sepsis is also very great from plugging

the nose, in fact we know it is almost impossible to prevent sepsis about the nose. It is necessary to exercise the greatest possible care in all surgical operations about the nose to prevent sepsis. In plugging the nose we have a quantity of decomposing blood which is very dangerous, and the method I have spoken of certainly is much more safe and more comfortable than plugging. On account of the susceptibility of the nose to sepsis, nasal diphtheria is more dangerous than that affecting the pharynx; in some such cases as those to which Dr. Irwin refers, plugging may be necessary, but not many.

In every case of nose bleeding I examine the heart, kidneys and liver.

Dr. T. P. Satterwhite read a paper on

INCONTINENCE OF URINE IN CHILDREN, TREATED WITH ATROPIA.

(See page 322.)

DISCUSSION.

DR. J. M. KRIM: I have a case under observation now that has been suffering with chorea and incontinence of urine for some time. The patient is a little boy ten years of age. In an examination I found he had phimosis. As soon as he was relieved of the phimosis I expected the incontinence of urine and chorea would cease, but they failed to do so. I put him on atropia, starting with $\frac{1}{100}$ grain. After three weeks treatment the incontinence and chorea disappeared. Phimosis is frequently a factor in the production of chorea, and usually ceases when the phimosis has been relieved, but in this case the chorea continued for three weeks after the condition of phimosis had been relieved.

DR. J. W. IRWIN: I wish to commend the paper in detail; it is a very explicit statement of a condition frequently met with by all physicians doing a general practice. Certainly everything has been made plain by the essayist, and the paper could hardly be improved upon in a general sense. The causes of nocturnal incontinence of urine have been carefully enumerated, and I have no doubt in many instances many of them conduce to the trouble of bed-wetting. But my experience goes a little beyond the local cause of this trouble. I have found most children who wet the bed usually of tubercular, or scrofulous diathesis, or they have a nervous predisposition. They have some history showing a departure from the standard of health as a rule. It is a rare thing to find a child who is robust and healthy in every respect to wet the bed persistently, but now and then a child will do so even when apparently in perfect health. When children overload the stomach, take excessive exercise, and become so profoundly tired that the call of nature is not sufficent to awaken them they wet the bed. Many cases can be accounted for in this way, in healthy children, who require no treatment beyond correcting the errors in diet or exercise.

The essayist spoke of the remedies employed in the treatment of this troublesome disorder and laid a great deal of stress upon the use of atropia. I believe that atropia as a single remedy is perhaps the best of all, but it is by no means a panacea. Instead of finding the urine acid in reaction, as stated by the essayist, I have frequently found it alkaline. I have often encountered children suffering from nocturnal incontinence of urine with cold extremities, cold skin, feeble circulation and a sluggish atonic condition of the whole body. In such cases I have found great relief to often follow the use of a solution of phosphorus—dilute phosphoric acid—three times per day as a constitutional remedy. In others I have found the tincture chlor. of iron to be most serviceable and it often gave permanent relief. I usually administer a dose of atropia at night and direct that as small a quantity of water be taken at bed hour as possible. I think phosphorus is a valuable remedy in many of the cases—the essayist also touched upon the use of this remedy—very frequently it has the effect of producing a complete cure. Quinine is also useful, especially tannated quinine. I believe this form of quinine to be the next best remedy to atropia, but it should be long continued and given in moderate doses. For a child two years of age two grains of tannated quinine three times a day would not be too much, and it should be continued at least, for thirty days. When a child is six, eight, or ten years of age and still wets the bed, I have found an excellent remedy in the Faradic current applied one pole (positive) to the nape of the neck,

the other (negative) to the perineum. An application of this agent twice or thrice weekly does much good, and is often more effectual than atropia. Another thing we must not lose sight of in giving atropia, is the enormous doses that a child can bear; a child may be given much larger doses of atropia in proportion to its age, than the adult, without producing a poisonous effect. I believe we often give too little atropia in treating children for incontinence of urine; to a child two years of age I have given $\frac{1}{60}$ grain at night without bad results. This is a larger dose than is usually given to the adult.

DR. P. F. BARBOUR: The subject under discussion is especially interesting to me, as I have seen a great deal of incontinence of urine in my clinical experience, and in private practice also. Like the gentlemen who have already spoken I think atropia is probably the best remedy in these cases. The first thing to do in the case is to ascertain the cause of the incontinence, and this very frequently is the most difficult part of the treatment. Dr. Satterwhite has mentioned most of the causes that are believed to be factors in producing incontinence. In my experience phimosis has been the cause of more cases of incontinence of urine than any other one condition. I have found in some cases where there was only partial phimosis, the inability to retract the prepuce completely set up a sufficient nervous irritation to produce this trouble at night. In fact I have had one or two cases where I failed to produce a perfect retraction on the prepuce and atropia had no effect; after I had secured perfect retraction, combined with atropia, the child rapidly improved. Of course, cystitis, irritation about the bowels, rectum, or in fact any part of the gastro-intestinal canal, or a reflex from any point in the whole system, is liable to produce incontinence of urine. The doses of atropia reccommended by the essayist are not too large by any means. Children can bear two or three times as much of this drug in proportion to their age, as an adult, and I have usually given very large doses even at the beginning of the treatment. I have prescribed for instance in solution one grain of atropia to an ounce of water, giving at a dose as many drops as the child is years old though I rarely exceed five drops as an initial dose. Cantharides is indicated in some of these cases, where there is atony of the sphincter muscles of the neck of the bladder. When it is not due to lack of nervous control but to atony of the muscles, as Dr. Irwin has said, the Faradic current is an excellent treatment. The action of belladonna I have not found so reliable as atropia.

DR. P. GUNTERMAN: I agree with Dr. Satterwhite as to the necessity of looking into the condition of the general health, and that this must be brought up to the normal standard before atropia or any other remedy directed to the relief of enuresis can be of any benefit. I do not agree with Dr. Irwin that the majority of the children who suffer from incontinence of urine are either of strumous diathesis, nervous temperament or scrofulous habit. I have treated quite a number of children for this trouble, and the patients I have had, particularly the last five treated during the past year, were of very healthy parentage, were themselves apparently very healthy children, with perhaps one exception, and certainly had no strumous or scrofulous taint. These five cases made a very prompt recovery under the atropia treatment. My mode of treatment was the same as that of the originator of the method, viz.: I gave one drop for every year of the patient's age of the solution of one grain of atropia to an ounce of distilled water, which in the oldest child made $\frac{1}{60}$ grain, and in the youngest $\frac{1}{240}$ grain to begin with. This was continued twice per day—in the afternoon at 4 o'clock and at 10 o'clock at night. This treatment was kept up as a rule about six weeks. One case, a boy seven years old, was relieved in four weeks, then the mother thought as the boy could not see very well and had some general constitutional disturbance, that the medicine had been continued long enough and quit. In about two weeks the treatment was again instituted and continued another four weeks when the boy was entirely cured. I had another little patient four years old, rather weak and delicate. He wet the bed at night—in fact was always wet. I gave him a constitutional treatment consisting of tincture of iron and corrected his urine. I gave him cantharadine—one-fiftieth of a grain three times a day—and before I knew it he had as bad a case of cystitis as I ever saw. It seemed as if he passed the whole of the mucous mem-

brane of the bladder within twenty-four hours. The little fellow recovered from that, but the incontinence was not relieved until I put him on atropia, starting with four drops ($\frac{1}{100}$ part of a grain) twice per day. He made a very steady improvement, kept on improving and finally became entirely well and is well now.

DR. T. P. SATTERWHITE: I think it is necessary to give atropia oftener than Dr. Guntermann states; it is eliminated very rapidly and twice per day is not sufficient. In all my cases I gave it three times a day and kept up the remedy at least a week or ten days after apparent cure. I did not withdraw it at once, but decreased the dose gradually.

ACCIDENT FROM THE USE OF BROMOFORM IN PERTUSSIS.

DR. P. GUNTERMANN: I wish to speak of a peculiar accident I had last Friday evening. I had prescribed for three children in the same family; one aet. 1½ years, one aet. three years and one not quite five; mixture of bromoform two drams to four ounces of syrup of tolu to be given, 60 drops to the oldest, 30 drops to the second, and 10 drops to the youngest child. All were suffering from pertussis. They took the medicine and I was to be advised how it acted when the supply was exhausted, or sooner if it did not act at all. I learned how it acted when the last dose was given. I was called at 7 o'clock in the evening to come at once, as one of the children was dying. When I reached the house I found that the child was perfectly dead drunk. I thought at first that the child had had a spasm and was simply limp from its effects; there was nothing to indicate any serious danger, and the child had gone to sleep. I told the family to let the child sleep, and if they saw anything out of the way to let me know. A half an hour later I was called again and found the second child unconscious and perfectly limber, having no control of the muscles whatsoever. In another half hour the oldest child was taken in the same way. The pulse of each was good, they were quiet, breathing was natural, pupils looked all right, so I inquired whether they had anything about the house that might have been taken by mistake. Investigation revealed that the only medicine they had taken was the bromoform and syrup of tolu which I had prescribed, which I knew could do them no harm. I found they had taken the last of the medicine that evening, and the mother said: "Doctor, there is something peculiar about that medicine; when you do not shake it there is always a lot of oil in the bottom." I knew then what the trouble was. They had not shaken the medicine and had taken pure bromoform, the last dose left in the bottle.

ATRESIA VAGINÆ.

DR. W. H. WATHEM: Four weeks ago I operated upon a married lady from Louisiana for atresia vaginæ of the upper half, the lower half being normal. By an examination through the rectum and bladder it was impossible to decide positively whether there was congenital absence of the upper part of the vagina, or whether there was simple atresia resulting from inflammation, with atrophy and thinning of the walls. The uterus was normal in size, and the ovaries and tubes apparently normal. She was perfectly developed in other respects, a bright, intelligent and accomplished woman. Her menstrual periods had been regular, though very painful and prolonged. I found fistulous opening through which I could introduce only the smallest probe, entering the vagina on the left side and through this menstrual discharge came away. A small uterine dilator was forced into this opening, and the blades spread making an opening large enough to introduce my finger. With the handle of a scalpel the united surfaces at the upper part of the vagina were divided, and then with my finger I began dissecting above, and discovered that I was not separating an adherent vagina but was separating through connective tissue uniting the bladder with the rectum, showing that there was congenital absence of the upper half of the vagina. I finally reached the uterus and continued dissecting through the connective tissue until I had opened into Douglas' pouch. This allowed the uterus to come lower in the pelvis between the rectum and bladder, and bring the os uteri near the vaginal tissue proper. There was but little hemorrhage, and the cavity was tamponed gently with iodoform gauze. She had no untoward symptoms; no eleva-

tion of temperature nor acceleration of pulse; she suffered no pain—absolutely in a normal condition; the dressings were changed every two days; the peritoneal wound healed completely, and the mouth of the uterus was down nearly to the vagina. She menstruated while at the Infirmary and had no pain; the flow lasted about half as long as had been customary before the operation. She left the Infirmary two weeks after the operation with the cervix firmly fixed, the os large enough to allow the introduction of end of my finger, and she was in every way feeling perfectly well. Had I not opened the peritoneal cavity the uterus would probably not have come down lower than it was, and the separated space between the bladder and rectum would have retracted until possibly there would have finally been but a small fistulous opening and the woman would have suffered with painful menstruation as in the past. But by separating into the peritoneal cavity allowing the uterus to come down it will do away permanently with any trouble in menstruation. But there is a question about which I have serious doubts in this case, viz: the ability of this woman to give birth to a child through the vagina, because the uterus is not attached to the vagina; it is attached only in front to the bladder, behind to the rectum, and at the sides to the connective tissue of the pelvis and the broad ligaments. I believe that were she to go into labor at term there would be danger of serious injury; the uterus when contracting and pressing the child outward would, because of feeble vaginal attachments, cause the cervix to become torn from the pelvic structures and allow the child to pass into the peritoneal cavity necessitating an abdominal section. With this belief I advised against her becoming pregnant, and told her husband the dangers such a condition might entail.

I have had two cases of total congenital absence of the vagina—one in a lady living in the southern part of the state, who is otherwise perfectly developed, breasts, vulva, etc., and having all the feelings of a perfect woman in relation to the opposite sex, neither vagina or uterus could be detected, although it is claimed by some authorities that there is always some of the uterus present in these cases, but it is very small. Her ovaries and tubes could be distinctly outlined.

The other case is a little girl of a prominent family in this city, where there is entire congenital absence of the vagina with the presence of the ovaries and a very diminutive uterus. As the child is but four years of age, and as the uterus is at this age very small, when she develops into womanhood it may develop sufficiently for menstruation which will have no outlet.

I report these cases because they are not of usual occurrence, many busy physicians may practice for many years and not see such a case. I have seen but these three cases. It is not a very uncommon thing to see acquired atresia of vagina resulting from specific infection, from infection following childbirth, from infection of measles, small-pox or even diphtheria, and one reason why I thought the last case upon whom I operated was acquired adherent vagina was because her husband told me that when she was eight years old she suffered with a severe attack of diphtheria, and had some vaginal discharge. The vagina, uterus and tubes are developed from the ducts of the Müller, from above downward. We may have absence of the upper, middle or lower part of the vagina, but we very seldom have absence of the middle of the vagina with the upper and lower parts existing, and as a rule we have either entire absence of the vagina, or only the upper and lower part. The vagina may be absent and the uterus fully developed, or the vagina may be absent and the uterus apparently absent. With entire absence of the vagina, with the presence of the uterus and ovaries well developed, the better treatment would be to remove both the uterus and the ovaries, as they could be of no use to the woman and might cause her a great deal of pain and suffering or even death. If you were to attempt to establish vagina in a case of this kind, you would have great difficulty in reaching the uterus and opening the parts well without danger of injuring the rectum and bladder, especially so if the union of these two organs happened to be such as to require any instrument except the fingers in separating them. When an opening is made, contraction will gradually take place until you will have practically nothing better than a fistulous opening. In acquired atresia, of course, we may by operation in many instances re-estabish the vagina.

CURRENT LITERATURE REVIEWED.

IN CHARGE OF ELLISTON J. MORRIS, M. D., AND SAMUEL M. WILSON, M. D.

THE ANNALS OF GYNÆOLOGY AND PÆDIATRY for July. Dr. Thomas D. Dunn reports

A Probable Case of Auto-Infection,

with some remarks on the bacteriological origin of puerperal sepsis. In the case reported by the author there was no laceration of the birth canal; the placenta was delivered spontaneously and was apparently entire. The patient complained of great weakness, pain and uterine soreness out of all proportion to the severity of the labor. The uterus did not contract firmly. Eleven hours after delivery the author was summuned, and found a temperature of 104°.6 F., pulse 112, great restlessness and considerable pain. The uterus was large, but no blood clots had passed. The patient then developed a typical case of septic infection and died on the tenth day of the disease. On the sixth day she complained of pain in several joints, and on the seventh both wrists, right elbow and knee were painful to motion and pressure, red, and on the eighth day large fluctuating abscesses were present. There were no rigors, but the temperature and pulse continued high till death. Uterine soreness ceased on the second day, but at no time were there firm contractions. On the sixth day the woman was etherized and the uterus carefully explored and curetted, with the removal of some debris—either fragments of placenta or a sloughing ulcer—the latter sensation being given to the finger.

The child was not nursed, owing to the severe illness of the mother. On the first day it was exceedingly fretful; on the second day it refused nourishment and had high fever, temperature 103° F. On the third day the right elbow was swollen and red. Septic arthritis rapidly developed, and on the fourth day left elbow, both wrists, ankles, and left knee were involved. Several abscesses were opened and discharged a sero sanguineous pus. The child died on the sixth day.

No post mortem was allowed to be held on the patient or could any bacteriological study be made of the lochial discharges.

The attendant being called away from the city, a visit was made by his brother five hours before the patient was delivered. The brother had come directly from a case of diphtheria, but had washed his hands with antiseptic soap, and unusual vigilance was used to sterilize the birth canal both before and after delivery. It was carefully examined by speculum, but at no time could evidence of diphtheritic deposit be found. The author is inclined to consider the case one of auto-infection on account of the condition of the child; as he thinks it impossible that the child could have become infected if any poison had been placed in the birth canal five hours before delivery.

Dr. Rufus B. Hall contributes some remarks on

Total Extirpation of the Fibroid Uterus,

describing illustrative cases. The author prefers total extirpation to Baer's method of extirpating the tumor and body of the uterus, leaving the cervix. He is opposed to the extra-peritoneal method by means of the nœud. He believes that with the present rate of low mortality following total extirpation of the fibroid uterus, we should not hesitate to advise all patients who are subjects of fibroid tumor to submit to the operation at once if their life is endangered or health destroyed either from the tumor or complications arising from it.

This issue also contains the abstract of a paper by Dr. Edward P. Davis, read before the American Gynæcological Society, on

Fatal Nausea and Vomiting of Pregnancy.

with the report of two cases. The conclusions at which the author arrives from his experience are: Nausea and vomiting of pregnancy are dangerous in proportion as they induce pernicious anæmia. Such a condition of danger is to be recognized by studying these cases in the light thrown upon them by the pathology of anæmia. While it is possible that sudden and radical improvement may occur in cases where a functional neurosis is the predominant factor, only when pernicious anæmia is once established delay is dangerous, no matter at what period of pregnancy the patient is seen. While it is true that raising and sustaining an impacted utures will relieve many milder examples of this affection, cases in which danger threatens should be set by prompt dilatation and emptying of the pregnant uterus, which is to be done by modern surgical methods.

Dr. Thomas Cunningham contributes an ticle on

Malignant Growths of the Uterus,

dwelling on the importance of early diagnosis in these cases. As there are very few symptoms in the early history of cancers of the sexual organs, he thinks it would be well if the profession made it a rule to emamine all female patients vaginally whenever they present themselves for treatment about the time of life when important changes are going on, and which statistics show are favorable to the development of malignant growths. Leucorrhœal discharges of whatever character and at all times should be carefully looked into and the cause removed, if possible. Shooting pains and dull aches in the sacral or hypogastric regions ought not to be overlooked, for sometimes these will be the only signs that are present.

In the "Department of Pædiatry," Dr. E. P. Bernardy reports

One Hundred and Sixty Cases of Measles in Private Practice.

Whooping cough occurred twenty-three times in the series. The author therefore thinks that there must be some relation other than accidental between the two diseases. He considers the use of bromoform in this complication unsafe and useless. Belladonna, pushed to its physiological effects, acted nicely in a number of these cases; when it failed, which it often did, pictate of ammonia was employed with perfect success in almost every case. In the series there were but three deaths, due to the complications present. He is satisfied that his success was due to his insisting on the minutiæ of nursing and treatment being carried out. His treatment of the measles proper was simple. When complications arose, he then used whatever medicine was necessary freely; stimulants were given sometimes in large doses without hesitation when the necessity demanded.

The remaining papers in this issue are: "Extirpation of the Uterus in Diseases of the Adnexa," by J. M. Baldy, M. D. This paper was published in *The American Journal of Obstetrics* for July and has been reviewed in connection with that journal:

"Hysterectomy in Bilateral Diseases of the Appendages," by Florian Krug, M. D. (This paper appeared in *The American Journal of the Medical Sciences* for June. A review will be found in THE MEDICAL AND SURGICAL REPORTER for June 23d, page 898.

"The Treatment of Face Presentation," by Edward Reynolds, M. D., and "Symphysiotomy versus the Induction of Premature Labor," by Charles P. Noble, M. D., both appeared in *The American Journal of Obstetrics* for July and have been noticed in that connection.

THE AMERICAN JOURNAL OF THE MEDICAL SCIENCES

for August. Dr. Mathew D. Mann contributes a paper on

Inflammation of the Ureters in the Female.

The author is convinced that ureteritis is common, that it is often overlooked, and that it is mistaken for other conditions in no way connected with it except in location. By palpation the ureters can be recognized, especially when enlarged by disease, as two cords, running from a point a little in front of the uterus and a little to one side of the median line, directed at first towards the sides of the pelvis, and then curving somewhat sharply backward until they go beyond our reach near the spine of the ischium. In front of the uterus their ends are separated by an inch or a little more of space.

The causes of inflammation the author enumerates as follows:

1. Injuries during childbirth.
2. Previous disease of the bladder.
3. Gonorrhœa.
4. Suppuration of the pelvis of the kidney.
5. Pelvic disease, such as pelvic peritonitis, cellulitis, and tumors.
6. Abnormal conditions of the urine.
7. Tuberculosis.

The ureters may be injured by pressure of the child's head or the blade of the forceps, the pendulum movement of the forceps being particularly likely to produce trouble. Especially is it likely to occur if the head pushes down an undilated cervix and the bladder with it. The author has noticed an irritation lasting a long time, evidently started by the pressure of the child's head. Gonorrhœa may extend from the bladder to the ureters though the author acknowledges that gonorrhœal cystisis is rare in women. Yet he states that he has seen several cases in which this occurred and he has no doubt that many of the failures to obtain relief from pain after celiotomy for pus tubes are due to coincident but enrecognized gonorrhœal ureteritis.

The author has very little faith in the extension of inflammation from contiguous structure, except along the surfaces. He does not believe that ureteritis ever follows an inflammatory action in the tubes, ovaries, pelvic peritoneum or parametrium by direct extension. If the two coexist, he would look either for a common cause in a gonorrhœal infection, or the ureteritis may be due to the inflammatory exudation causing pressure and obstruction. Still less is he able to believe that an anteflexed and fundus can by pressure, even for a very long time, and "under conditions favoring the progress of the disease," induce a ureteritis, pyelitis, and pyelonephritis. He further protests against the doctrine that vesical irritability may be due to the pressure of an anteverted or anteflexed uterus. In such conditions he has never failed to find some other cause for the vesical irritability, usually in an abnormal condition of the urine.

The condition spoken of "renal insufficiency," the author believes is often a result of stimulation of the inhibitory influence of the nerve centers, due to peripheral irritation in the sexual organs. It is often found associated with ureteritis and, the author is fully persuaded, often stands in the relation of cause and effect.

That condition of the urine which is characteristic of the condition known as lithæmia is, in the author's opinion, the most common cause of the ureteritis.

In regard to the pathological condition, the author states that usually both ureters are affected; but often one side—usually the left—is much more seriously involved than the other.

As to the symptoms, the author states that the most common symptom is frequent micturition, which may even become continuous. In only a few cases out of those he has met has this symptom been absent. The next symptom of importance is pain over the ureters—one or both—the left side being more commonly affected than the right. This pain is described as burning or boring, and is nearly constant, but is almost always greatly aggravated as the menses approach, even be-

ing agonizing during the flow. One curious symptom which the author has noticed as frequently existing in cases associated with renal insufficiency is an absolute distaste for water.

The diagnosis is to be made, first by the symptoms; secondly, by the physical examination, and thirdly, by an examination of the urine. The palpation of the uterer in the pelvis is done as follows: The finger is carried along the anterior vaginal wall upwards and outwards near the brim of the pelvis to one side of the uterus. It is then passed forward, stroking the pelvic wall and carefully feeling for a cord-like body under it. Sometimes a bimanual examination will greatly aid in discovering the ureters. In every case that the author has seen, tenderness on pressure was present, and sometimes to an extreme degree. A feeling of a desire to urinate is often complained of on touching the ureters. By tracing the course of the ureters carefully with the finger tips, disease of the bladder and uretha may be excluded. Should bladder tenderness co exist it will be hard to distinguish the ureteritic disease unless the ureters are enlarged, or at least distinctly palpable.

The examination of the urine is an absolute necessity and no examination can be considered complete unless it embraces an estimation of the amount of urine passed in the twenty-four hours, as well as a careful chemical and microscopical examination. The urine will often be scanty; always acid in reaction; often hyperacid, unless cystitis coexists, and often of low specific gravity, 1010 to 1015. The sediment will consist of urates, uric acid, calcic oxalate, often pus, and a little epithelium. All attempts to locate the seat of the disease by the presence of peculiar types of epithelial cells will fail.

In regard to the prognosis, the author states that if the trouble has not lasted very long, and the ureters are not much enlarged or thickened, tho prognosis is good, though the time necessary for a cure will be considerable.

As to treatment, besides general out door exercise and measure to promote the general health, there should be a careful regulation of the diet and the urine kept as unirritating as possible. In many cases sugar and starches seem to be poorly digested and thus do harm and are to be avoided. Alcoholics, especially wine and beer, must be given up. In cases where there is renal insufficiency the author advocates the use of the hot air bath or a Turkish bath. Massage is also of great use in these cases and can be used immediately after the bath. The use of alkalies is of the utmost importance, and they should be used long and persistently, in sufficient quantity to keep the urine alkaline or at least neutral. Constipation is to be avoided. If anæmia exists, the use of iron and arsenic will be beneficial. The author has seen good results follow an exclusively milk diet. In regard to remedies that have a local action he speaks in praise of sandalwood.

The direct treatment by means of catheterization of the ureters, advocated by Kelly and the surgical treatment of the disease are also discussed in the paper.

Dr. James D. Heard describes in a paper entitled,

Certain Cases of Heterotopia of White Matter Occuring in the Human Medulla Oblongata,

comes to the conclusion that the central nervous system possesses, like other organs, a tendency towards occasional misplacement of its elements. The most frequent and fairly constant histological anomaly appears to be the presence of a column of white nerve fibres arising at the level of decussation of the pyramids, and thence proceeding upwards, occupying a position internal to the substantia gelatinosa. The fibres of this column may take origin from the lateral or from the posterior column. In certain instances these fibres have been traced above into the corpus restiforme, but this termination has seemed improbable in other cases in which the fibres have apparently extended to a much higher point.

Dr. W. Gilman Thompson contributes "Notes on the Observation of Malarial Organism in Connection with Enteric Fever," and gives as his opinion that while it is unwise to accept the term typho-malarial fever as indicating a third form of disease, which is neither typhoid fever nor malarial fever, it cannot be denied that the two latter diseases may coexist.

The other papers in this issue are: "The Isolated Type of Friedrich's Disease," by H. J. Mackay, M. B., C. M., Edinburgh. "A Study of One Hundred and Thirty-eight Cases of Pott's Paralysis," by J. H. Huddleston, A. M., M. D. "A Clinical and Experimental Study of Uræmia," by William E. Hughes, M. D., Ph. D., and William S. Carter, M. D. (Concluded in next issue.) "Round-Celled Sarcoma of the Anterior Mediastinum; Extensive Metastasis, including the Brain, both Choroid Coats, Oculo-Motor and Optic Nerves, and External Ocular Muscles," by Arthur V. Meigs, M. D., and G. E. DeSchweinitz, M. D.

Malakin.

F. Merkel (*Munch. med. Woch.*) observes that this drug has been recommended as an antipyretic, antirheumatic, and antineuralgic. It is a salicylic derivative and contains about 50 per cent. of salicylaldehyde; thus 4 g. corresponds to a little more than 2 g salicylic acid. The author has tried malakin in 18 cases, 15 of acute rheumatism, 2 of enteric fever, and 1 of neuralgic pains in typhlitis. Its action is very mild, and no unpleasant bye-effects are noted; at most the profuse perspirations generally following its administration might be looked upon as unpleasant. Perhaps the quality of the pulse suffered occasionally. The drug has a distinct antipyretic effect, but this is not permanent. As an antirheumatic it can produce a decided improvement in the articular manifestations. In 15 cases of acute rheumatism a favorable effect was noted in nine, and in two of these other remedies had been used without benefit. The author looks upon malakin as an addition to our resources where other remedies fail. Whether it can be given like the salicylates in larger and more frequent doses remains to be shown.

PERISCOPE.

IN CHARGE OF WM. E. PARKE, A.M., M. D.

GYNECOLOGY.

Small Cystic Degeneration of the Ovary.

Francis Foerster, in the *American Journal of Obstetrics*, 1894, presents the results of comparative microscopical studies of the ovaries as follows:

1. Small cysts are of common occurence, not only in human ovaries, but also in those of the sow, ewe, and the cow.
2. In accord with the researches of Nagel, I am convinced that the small cysts are originally Graafian follicles.
3. In a process not exactly pathological, the stratified epithelial lining of the Graafian follicle undergoes peculiar changes tending to its disappearance.
4. The epithelium first breaks up into an indifferent or medullary tissue, and from this arises myxomatous, vascularized connective tissue.
5. The type of the newly-formed myxomatous tissue varies in different animals. It may be medullary myxomatous lymph tissue, or fully developed myxomatous tissue with a well-marked basis substance.
6. The newly-formed myxomatous tissue is always scantily supplied with blood vessels, which probably grow into it from without.
7. The myxomatous lining of the cyst-wall is always well defined towards the outer fibrous coat, the original capsule of the Graafian follicle.
8. The ovule is present at the beginning of the formation of a small cyst; later it probably perishes, owing to the changed environments.

MEDICINE.

A New Method of Diagnosis and Prognosis of Chronic Nephritis.

Dr. Basset, of Toulouse, in a paper read at the International Medical Congress held in Rome, said that as long ago as 1860 he had read a paper before the Medico-Chirurgical Society of Toulouse, on "The Non-Elimination of Odorous Substances by the Kidney, as Bearing Upon the Diagnosis and Prognosis of Nephritis." Since that time he had found a new and more precise method of arriving at this end, namely the employment of iodides and of the salts of quinine, the elimination of which by the kidneys is so rapid in the normal condition, and the comparative dosage of which may be made so exactly. The following were the conclusions of the communication :

1. The elimination of odorous substances by the kidneys is retarded, diminished or abolished in chronic nephritis.
2. This examination of the odor of the urine is an easy and rapid method of ascertaining the functional condition of the kidneys and of determining their anatomical integrity or the reverse, and thus of arriving at a diagnosis and prognosis of Bright's disease.

The salts of certain substances which are ordinarily elimited in great part and rapidly by the kidneys, such as the iodides, the bromides, the salts of quinine and the turpentines, which form with nitric acid a precipitate soluble in ether and alcohol, are very useful as furnishing in a precise manner, by the retardation or diminution of their elimination in the urine, data upon which to base a diagnosis or prognosis of the various degrees of chronic nephritis.—*Maryland Medical Journal.*

Treatment of Renal Disease.

Dickinson (*The Lancet*), expresses the following views as to the treatment of nephritis:

Acute nephritis.—The disease has a tendency to recover spontaneously, qualified especially in scarlatinal nephritis by a tendency to fibrosis. Warmth in bed and a liquid diet are essential to recovery. The food should be milk, animal broths, and a moderate amount of farinaceous food. Water and aqueous drinks should be given freely. After a calomel purge it generally suffices to give a saline. Digitalis is to be given only if there is dropsy or if the urine be very scanty. Even though the urine contain blood no drug should be taken to check the flow, as it is rather beneficial than otherwise. The usual diuretics are useless and even harmful, cantharides being especially harmful.

Chronic albuminuria may continue almost indefinitely without much apparant injury to the patient. The heart will hypertrophy as a salutary adjustment, and the dropsy may be indefinitely postponed. In a quiescent case temperance in diet is much to be preferred to austerity. Farinaceous and vegetable food my be allowed without restriction, milk in abundance, watery drinks freely, and the less alcohol the better. A purely milk diet is not advantages. When urine is scant and of low specific gravity, large amounts of liquor should be taken. It is often necessary to save life. In movable cases it is well to have the patient in a warm climate with a low relative humidity. So far as medicines are concerned it is a good practice to give a ferruginous laxative combined with a small dose of strychnine. The normal termination of the granular kidney is by uremia. Sweating should be enforced where the uremia is indicated by headache, vomiting, etc. A Turkish bath every ten days may long ward off what would otherwise happen, or a hot air bath by a lamp under a sheet may be used. If the patient be weak, it is much better to give a partial hot-air bath than to envelop the whole body. The legs may be alone enveloped in the sheet

and this will be most invaluable in many instances.

Treatment of the Dropsy.—Nature's cure is hypertrophy of the heart. Measures which lessen the contents of the vessels and increase the force of the heart are indicated. Digitalis is almost invariably indicated. Most diuretics are useless; some are harmful, as cantharides. Vegetable salts of potash may be used. Hydragogue purgatives have their use. The abdomen may be tapped when there is excessive ascites, but the legs must never be tapped. Renal asthma admits of relief with alcohols, ethers and amyl nitrite.—*Univ. Med. Magazine.*

Nucleo-Albuminuria.

Pichler and Vogt (*Centralbl. f. inn. Med.*), observe that a more exact examination has shown that proteid substances in the urine do not only consist of serum, albumen, and globulin; nucleo-albumen is characterized by its solubility in acetic acid, its precipitation by magnesic sulphate, and by the separation on boiling with dilute mineral acids of no re ducing substance. It must be distinguished from globulin and mucin. Nucleo-albuminuria seems to appear when any damage is done to tissue cells, or more seldom when secretions holding nucleo-albumen, such as bile, get into the blood. In experiments on dogs, the authors show that the injection of casein produces nucleo-albuminuria. The simplest way of damaging protoplasm is to limit the supply of oxygen, and in these cases lactic acid, etc., appears in the urine. The authors demonstrate by their experiments on animals that temporary obstruction of the femoral artery will give rise to nucleo-albuminuria. In four experiments on dogs in which the renal artery was temporarily obstructed nucleo-albumen appeared. Serum-albumen was absent in one case, and only present for a short time in the others. The only changes found in the kidney were fat in the cells, and some alteration in the protoplasm belonging to the cells of the convoluted tubes. Experiments thus show that the renal tissue may be the source of nucleo-albuminuria, and this source must be excluded before others are thought of. The so-called cyclical albuminuria is often nucleo-albuminuria. In some cases of temporary compression of the chest or limiting the blood supply to a limb in young people albuminuria may be produced, but nucleo-albumen is more the exception here than the rule. These researches show further reasons for separating nucleo-albumen from ordinary albumen. The authors' investigations in the case of disease yielded similar results to those of Obermayer.

Treatment of Atonic Gastric Dilatation.

Wegele (*Munch. med. Woch.*) deals with the severer forms of this disease, and not with such as accompany any gastric affection lasting over any considerable time. For the practical distinction of mild from severe cases, the test breakfast is useful; in marked cases remains of food are found in the water used for washing out the stomach on the following morning, whereas in mild cases the stomach is able to deal with such moderate demands. Pronounced atonic dilatation is not, in the author's opinion, such a rare event as is sometimes represented. At first the dry diet was employed, and for slighter cases it sufficed; but a rigorous carrying out of this regimen was often of disadvantage. Washing out the stomach proved a great advance, as in this wash the stomach was freed of every acid and fermenting contents. Here, however, a considerable amount of nourishment is withdrawn, and the patient's nutrition and weight may suffer. Rectal alimentation must in addition be had recourse to; either water alone or the desirable food stuffs may be thus used. The amount of urine passed is a practical measure of the gastric insufficiency. By a strict dry diet and supplying the necessary water by the rectum, the patients condition may be greatly improved. Clysters containing grape sugar are apt to ferment and to produce diarrhœa, and the same is true of those containing peptone frequently repeated. The diet must be suited to the condition of the gastric chemistry. If hyperacidity is present large doses of alkalies are indicated. Washing out the stomach is, according to the author, best done in the morning. Raising the foot of the bed is said to be useful in helping to empty the pyloric antrum. If fermentation is present, harmless antiseptics should be added to the water, and salicylic acid, creosote, bismuth, salicylate given internally. If the adominal walls are lax, a belt should be used. The author says that the prognosis is considerably improved by the use of the dry diet, and supplying food by the rectum.

Dulcin.

Kobert (*Centralbl. f. inn. Med.*) says that pure saccharin is described by many as not being really sweet. Dulcin, discovered by Berlinerblau, has a pure sweet taste, and excels saccharin in sweetness some 200 to 250 times. In structure it is an aromatic urea derivative—paraphenetol carbamide—and is allied to phenacetin. It is soluble in 800 parts of water at 15° C., in 50 of hot water, and in 25 to 97 per cent. of alcohol. Experimentally dulcin has been shown to be harmless to rabbits, but in dogs, which are more susceptible to its action, the evidence is somewhat conflicting. From his own experiments on cats, the author concludes that doses corresponding to such as would be used in man are harmless; with abnormally large doses the cats became ill, and eventually died with cerebral symptoms. In diabetes it must be used in relatively small doses. Ewald has given it in doses up 1.5 g. in the day. The author concludes that dulcin in reasonable doses is, as far as we know at present, harmless, and is an advance upon the use of saccharin, owing to its sweeter taste. It does not bring about any decomposition of the blood.

Ether Spray in Coccygodynia.

Dr. E. McFarlan, New York, reports in *The American Therapist* an obstinate case of coccygodynia completely relieved by local ap-

plication of the ether spray. The first application was made over the entire sacrum and coccyx and continued for about five minutes, at first seemingly intensifying the pain, but this was followed by relief lasting through the day and night. The second treatment the next morning produced almost immediate relief. After the third application, the victory was complete. The daily use of the ether was continued for one week and now, after many months, there has been no return of the disease.

Throat Conditions Observed in Gouty Subjects.

S. Solis-Cohen (*Phil. Med. News*,)—Inflammation is not necessarily present in gouty sore throat. In the author's experience, the most prominent symptoms have been of a sensory nature, viz: pains and perversion of sensation over limited areas which, to the eye present no alteration whatever. The site most frequently complained of is the left pharyngeal angle just behind the free border of the soft palate; other areas are the general region of the epiglottis and base of the tongue. The pain is described as burning, stinging, pressing, etc. With most patients, cocaine applied locally, will for a time abate these paræsthesiæ. Where it does not, the deeper fibrous structures of the pharynx are probably involved.

Occasionally, during a gouty exacerbation, visible alterations of structure are manifested over the painful areas. The vessels dilate, the follicles enlarge and the mucous membrane may take on a dusky hue, or become of a "corn-beef" color.

Where the gouty manifestations appear in the larynx, the arytenoid eminences seem to be a favorite seat of morbid sensation. The crico-arytenoid joint may, as in rheumatism be the point on which the systemic state focuses. The natural activity of this articulation causes pain on respiration as well as in attempted phonation.

Local treatment is palliative only. Cohen prefers the glyceral of tannin applied by cotton wad, or the spray of sulpho-carbolate of zinc —5 gr. to rosewater 1 oz Applications of coca, fluid extract or infusion, may give relief where cocaine is badly borne or is for any reason contra-indicated. Aconitine oleate (2 per cent. in oleic acid), menthol in liquid petrolatum, bromoform, are all useful. In the more chronic cases, iodine with potassic iodide in glycerin, and carbolic acid, forms a valuable topical agent.

Thorough cleansing with a alkaline aromatic spray is a necessary prelude to all applications. For systemic treatment the usual measures are adopted against the uric acid diathesis. Strontium bromide has given the author much satisfaction.—*A. M. S. Bull.*

Special Exercise to Correct and Prevent Constipation.

Friction, rubbing or massage over all parts of the abdomen two or three times per day by the patient himself, or less frequently by a good magnetic operator, will help to promote vital action of the bowels. If not convenient for the patient to walk or ride for exercise, he can secure the advantage of both in large degree by the following exercise, taken in his room.

Standing with the feet well apart, to broaden your base, bend or flex the lower limbs at the knees and extend the same about twice a second, or one hundred times a minute, for several minutes at a time, three or four times a day and at the same time twist or turn the body above the hips first to the right and then to the left as far as you well can, resting the hands upon the hips or allowing them to hang by your side. At each turn of the body toward the right or left you will bend the knees about three or four times. You thus use chiefly the flexors and extensors of the thighs and the rotating muscles of the trunk. The motion of the body is meanwhile up and down, and the motion of the chest and head is alternately to the right and left. To facilitate the turning of the body, the heel of the limb opposite the one on which you rest, as the body sways from side to side, may be raised so as to allow the limb to turn upon the ball or toe of the foot To get the best effect of this exercise, the head must be kept well up, the shoulders back and the spine erect during exercise. The bowels may generally be allowed to rise and fall with the body, but at times it is well to exercise the diaphragm by endeavoring to draw beneath it the liver and viscera of the abdomen.—*Jour. American Health Society.*

Venesection in Renal Asthma; Instant Relief; Uric Acid in the Serum.

I was hastily summoned to this patient on November 20th, 1893, in the absence of his ordinary medical attendant, and found the symptoms so urgent that I was obliged to act alone and at once. The case was that of a man, aged 52, who had been under treatment for albuminuria and dropsy for rather less than a week. I found him in a state of orthopnea, and tossing about in bed in his distress. Expiration was prolonged and accompanied with loud dry rales; the pulse was somewhat slow—the actual rate was not noted—and, as it appeared to me, of markedly, high tension.

I immediately bled the patient *pleno rivo* to 15 ounces, with the result that he could at once lie down and that all the distressing symptoms had disappeared next morning. He was afterwards in the Western Infirmary for some time, and there is reason to believe that the attack has been an acute one, and not likely to merge into chronic Bright's disease.

Having previously discovered crystals of uric acid in the serum of two cases of convulsions which I had bled, and being much interested in the important researches of Dr. Haig on uric acid in the causation of disease, especially headache, high-tension pulse, convulsions, epilepsy, etc., I forwarded a spec-

men of the blood to him in the above case, which he was so kind as to examine. He reports as follows on November 24th, 1893:

"The specimen of blood you sent me on November 21st contained uric acid to the extent of 0.015 per cent. My experience with blood drawn during life is too small to draw any sweeping conclusions from; but the largest quantity I have found in blood of venesection was 0.03 per cent. in a case of cerebral hemorrhage, I have often found smaller amounts, 0.002 to 0.004. I should think, therefore, that 0.015 per cent. represents a distinct excess of uric acid, but that double this quantity may be found in some cases."—*Canadian Practitioner.*

Anthrax in Man.

Muller (*Deut. med. Woch.*, June 14th, and 21st, 1894,) refers to different views in connection with local treatment. It is impossible to destroy the disease by excising the site of inoculation. In guinea-pigs amputation of a limb two or three hours after the foot has been inoculated cannot save the animal. By the time the injection is ended absorption must have commenced, as is shown by the rapid proliferation of the bacilli in the tissues. The disease produced by anthrax would appear to be largely due to a toxic action. It may, however, be difficult to find bacteria in the blood; when absorbed they may be deposited in parts where the circulation is slow as in the liver, spleen, and marrow of bones. It has been shown with almost certainty that products may be isolated from anthrax cultures, which produce symptoms like those due to anthrax. Whether phagocytosis plays a part in human anthrax is undecided. The author's observations would lead to a negative conclusion. Different organs have difficult capabilities of dealing with anthrax. Thus, in rats the spleen seems to have chief action, but in rabbits the liver. In man enlargement of the spleen is noted early. It must be the object of treatment to get the cells at the site of inoculation to arrest the dissemination of the bacteria and to protect the cells in the whole body against the poisoning. If excision of the inoculated part cannot arrest the disease, it might be thought that the anthrax bacilli and their products might be let out by incision. The author concludes, however, that incision should not be practiced. Anthrax is one of the most virulent of the blood parasites, and by incision there is the danger of a fresh invasion of the blood in the vessels thus laid open. The products at the site of inoculation are harmful to the individual if absorbed, but they are also destructive to the anthrax bacilli *in situ*. The line of treatment recommended by the author is the following: The affected part and adjacent joint are fixed to prevent dissemination. The limb is also elevated to assist the venous return, so that more arterial blood may come to the part. Mercurial ointment is applied to prevent secondary infection. Means are adopted to improve the circulation, such as alcohol in large doses and nutritious diet. All the cases, including severe ones, which have been thus treated in von Bramann's clinic since 1890 have recovered.—*British Medical Journal.*

The Abuse of Milk in the Treatment of Albuminuria.

Lecorche and Talamon (*Bl. f. klin. Hydrotherapie*) condemn the indiscriminate use of milk alone as the diet of those who suffer from albuminuria. They fully recognize and admit the advantages to be derived from an exclusively milk diet, but they maintain that each must be judged on its individual merits, just as with every diet or medicament. They contest the view that milk of itself will provide sufficient nourishment for an adult; the rules that apply to the growing person cannot be transferred in full to the case of the fully grown. To preserve the balance of tissue change, an adult would require to take about four litres (about seven pints) of milk per diem, a quantity which, as experience shows, can rarely be taken, and then only at the risk of digestive disturbances which make the expected benefits quite illusory.

It is, therefore, going upon a wrong principle to say that every case of albuminuria ought to be sustained on a diet of milk only. Besides, the hope that by this diet albumen can be made to disappear from the urine is altogether vain, at least such is the experience of the writer's after a long and persevering research. They believe a strict "milk regime" is justifiable only when an excessive diuresis is indicated; that is, above all, in acute nephritis, and in the second place, in acute exacerbations of chronic inflammatory disease of the kidney.

It does not matter whether these exacerbations manifest themselves by hemorrhage, albuminuria or uremia. But this mode of treatment must not be carried too far; after a week or two the ordinary diet must be resumed, and the medical attendant must have recourse to other methods in his struggle with the primary disease.—*Glasgow Med. Journal.*

Imcubation Period of Infectious Fevers.

The following table in *The Year Book of Treatment* for 1894 is of interest as giving the views of the Clinical Society of London on the "Incubation Period of Infectious Fevers."

Disease.	Min. No. Days.	Most usual No. Days.	Max. No. Days.
Scarlet Fever . .	1	2	7
Diphtheria . . .	2	2	7
Influenza	1	3	5
Measles.	4	10	14
Variola	9	12	14
Enteric Fever . .	5	12	23
Varicella	13	14	19
Rubeola	8	18	21
Mumps	12	19	25

Diseases of the Heart Muscle in Typhoid Fever, Scarlet Fever, and Diphtheria.

Romberg (*Deutsche Archiv fur klinische Medicin*, Vol xlix, parts 4 and 5). In typhoid fever the highest grades of parenchymatous degeneration of the heart-muscle are present by the end of the second week, and then disappear but slowly in the later weeks. Interstitial myocorditis begins mostly at the end of the second week. In scarlet fever interstitial myocarditis begins mostly on the fourth day, and becomes excessive in the middle of the second week. In diphtheria this degeneration begins somewhat later, at the seventh or ninth day, and is at its highest development at the end of the second or beginning of the third week The characteristic fatty degeneration of diphtheria begins often very late. Symptoms during the fever: irregularity and smallness of the pulse and dilatation. The best sign of dilatation is the gallop rhythm. A very slow pulse is a bad prognostic sign in diphtheria. Dilatation is an important physical sign. The amount of urine is usually diminished; there is slight albuminuria with or without hyaline casts.

Myxedema Treated by Thyroid Extract.

Shattuck (*Boston Medical and Surgical Journal*,) reports four cases of the disease treated with the dried extract of the thyroid gland. Three of the cases were, undoubtedly myxedema, and are examples of cures. The first case, however, presented some difficulties in diagnosis, and was not improved in the least by the treatment. In remarking upon the cases he says that in the first place we must recognize that there are differences in degree. Total inactivity of the gland is one thing, partial inactivity another. It is highly probable that the latter does not necessarily lead to the former. At all events, long periods of years may elapse before the mild passes into the fully-developed disease. Now that our attention is awakened he is convinced we shall find them pretty common. The dosage is important. In one case seven and a half grains of the extract were given at a dose. This caused terrible angenoid attacks, which required morphia to control them. Pain in the limbs and backs have been noticed as caused by the treatment. It is well to begin with very small doses,—one grain of the extract twice daily,—and gradually increase it. It is probable that the treatment will have to be continued through the life of the patient, and that larger doses will be required in cold than in hot weather. —*University Medical Magizine.*

ARMY AND NAVY.

CHANGES IN THE U. S. ARMY FROM AUGUST 25, 1894, to SEPTEMBER 1, 1894.

Major John D. Hall, Surgeon, upon the arrival of Major J. C. Merrill, Surgeon at Fort Sherman, Idaho, will be relieved, and report for duty at Madison Barracks, N. Y., relieving Major Daniel G. Caldwell, Surgeon.

Major Caldwell on being thus relieved, will report for duty at St. Francis Barracks, Florida, relie ing Captain Jefferson R. Keen, Assistant Surgeon.

Captain Kean on being thus relieved, is ordered to Key West Barracks, Florida, for duty.

Major Louis M. Maus, Surgeon United States Army, Fort Sam Houston, Texas, granted one month leave of absence.

Leave of absence for one month, to take effect when relieved from duty at St. Francis Barracks, Florida, is granted Captain Jefferson R. Kean, Assistant Surgeon.

Captain Louis A. La Garde, Assistant Surgeon, relieved from duty as Attending Surgeon, and Examiner of Recruits, Headquarters Department of the Colorado, and ordered to Fort Logan, Colorado.

By direction of the Secretary of War the following changes in the station and duties of officers of the Medical Department are ordered:

Major W. H. Gardner, Surgeon, relieved from duty at St. Paul, Minnesota, and ordered to Fort Custer, Montana, for duty.

Major Henry McElderoy, Surgeon, relieved from duty at Omaha, Nebraska, and ordered to Fort Robinson, Nebraska, for duty.

Major George W. Adair, Surgeon, relieved from duty at Fort Robinson, Nebraska, and ordered to Washington Barracks, S C., for duty.

Major Joseph H. Corsin, Surgeon, relieved from duty at Washington Barracks, S. C., and ordered to Fort S. A. Russell, Wyoming, for duty.

First Lieutenant Frederick P. Reynolds, Assistant Surgeon United States Army, United States Military Academy, West Point, N. Y., granted 30 days leave absence.

CHANGES IN THE U. S. MARINE HOSPITAL SERVICE, FOR THE FIVE WEEKS ENDING AUGUST 25th, 1894.

P. H. Bailhaehe, Surgeon, granted leave of absence for five days, August 3d, 1894.

J. B. Hamilton, Surgeon, granted leave of absence for five days, August 16th, 1894.

H. W. Sawtelle, Surgeon, granted leave of absence for five days, August 12th, 1894.

J. M. Gassaway, Surgeon, granted leave of absence for two days, August 11th, 1894.

W. Stonerly, Surgeon, granted leave of absence for seven days, July 28th, 1894.

Fairfax Irwin, Surgeon, to proceed to Brussels, Belgium, for special duty on July 24th, 1894, to Rotterdam, Netherlands, July 27th, 1894, to proceed to Hull, Liverpool, and other English ports on special duty August 9th, 1894.

F. W. Mead, Surgeon, granted leave of absence for thirty days, August 4th, 1894.

C. E. Banks, Past Assistant Surgeon, to proceed to Halifax, N. S., for special duty August 16th, 1894.

A. H. Glennan, Passed Assistant Surgeon. Granted leave of absence for six days August 14th, 1894.

S. D. Brooks, Passed Assistant Surgeon. To proceed to Duluth, Minn., and Superior, Wis., as Inspector, July 24th, 1894.

J. H. White, Passed Assistant Surgeon, relieved from duty at Savannah, Georgia, and

ordered to report to the Medical Official in command of the Service at New York, N. Y., for duty, August 6th, 1894.

P. M. Carrington, Passed Assistant Surgeon. To proceed to Evansville, Indiana, for duty, August 6th, 1894.

J. J. Kinyoun, Passed Assistant Surgeon. To proceed to Buda Pesth, Austria, to represent Department at International Congress of Hygieu and Demography, August 14th, 1894.

G. F. Vaughan, Passed Assistant Surgeon. Granted leave of absence for six months, August 23rd, 1894.

C. P. Wertenbaker. To report at Bureau for instructions August 4th, 1894. To proceed to Cape Charles Quarantine for temporary duty, August 7th, 1894. To proceed to Delaware Breakwater Quarantine for duty August 20th, 1894.

Assistant Surgeon, C. H. Gordner, granted leave of absence for fifteen days August 18, 1894

Assistant Surgeon, Seaton Norman, to proceed to Baltimore, M. D., for duty August 6, 1894.

Assistant Surgeon, E. K. Sprague, to inspect unserviceable property at St. Louis, Mo., July 26, 1894.

PROMOTIONS.

Assistant Surgeon, E. R. Houghton, commissioned as Passed Assistant Surgeon, July 20, 1894.

NEWS AND MISCELLANY.

Dr. Charles P. Noble has removed to 1637 North Broad street, Philadelphia.

Dr. Charles W. Burr has removed to 1327 Spruce street, Philadelphia.

American Public Health Association.

The American Public Health Association will convene at the city of Montreal, Canada, Tuesday, September 25, 1894 at 9 o'clock a. m., and continue four days.

The regular sessions will be in Association Hall, Y. M. C. A. Building, Dominion Square, opposite the Hotel Windsor. The following topics have been selected for consideration at this meeting:

1. The polution of Water-Supplies.
2. The Disposal of Garbage and Refuse.
3. Animal Diseases and Animal Food.
4. The Nomenclature of Diseases and Forms of Statistics.
5. Protective Inoculations in Infectious Diseases.
6. National Health Legislation.
7. The Cause and Prevention of Diphtheria.
8. Causes and Prevention of Infant Mortality
9. The Restriction and Prevention of Tuberculosis.
10. Car Sanitation.
11. The Prevention of the Spread of Yellow Fever.

Upon all of the above subjects special committees have been appointed; therefore all papers upon these topics should be presented to the appropriate committee in season to be incorporated as a part of the report of the committee, if deemed advisable.

The Executive Committee announces the following additional subjects upon which papers are invited:

12. On the Education of the Young in the Principles of Hygiene.
13. Private Destruction of Household Garbage and Refuse.
14. Disinfection of Dwellings after Infectious Diseases.
15. Inspection of School Children with Reference to the Eyesight.

English, French and Spanish will be the official languages at this meeting. Papers may be read and discussions take place in either of these languages. All discussions will be stenographically reported for the use of the Association.

The American Public Health Association was organized in 1872, by a few public-spirited men who foresaw the need of bringing together in one body the ablest sanitarians in the country, for the purpose of inaugurating measures for the restriction and prevention of contagious and infectious diseases, and for the diffusion of sanitary knowledge among the people. Its membership has been augmented from year to year until now it constitutes the largest and strongest sanitary body in the world, and embraces in territorial extent the United States, the dominion of Canada and the republic of Mexico. Under the impetus given by its work, state and local boards of health and sanitary associations have been organized, sanitary publications increased, and hygienic knowledge widely and extensively diffused. The association has already published nineteen large and valuable volumes, increasing at the rate of one a year, and containing the papers, reports and discussions presented at the annual meetings. These volumes constitute in themselves a library upon sanitation; they are elegantly printed and bound, and are alone worth more to any person interested in hygiene than the cost of membership. Each member is entitled to the annual volume, delivered free of expense. In addition thereto, the association has published a standard work upon "Disinfection and Disinfectants," besides the Lomb Prize Essays, now so widely known to the American public.

Among its members may be found physicians, lawyers, ministers, civil and sanitary engineers, health officers, teachers, plumbers, merchants, etc.—in fact, every profession and many of the industries are represented in its list of members. The only qualifications required for membership are a good moral character, an interest in hygiene, and the endorsement of two members of the association. Cost of membership, five dollars a year. For blank applications for membership, or particulars relating to the association, address the secretary.

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ORIGINAL ARTICLES.

IS VACCINATION WITH BOVINE VIRUS PERFORMED IN ACCORDANCE WITH THE SCIENTIFIC TEACHINGS OF THE DAY?

F. W. JAY, M. D., Chicago, Ill.

To carry out rationally a proper technique in the preparation and use of bovine virus, the nature of the vi us must be appreciated as well as the manner in which it confers immunity to individuals inoculated with it. At present, although the active principle of cow-pox virus has not been demonstrated, we can assume enough of its nature to allow of formulating positive rules regarding its management.

After an investigation of thirty years, Edward Jenner, in 1798, gave to the world the wonderful fact that immunity could be secured against small-pox by vaccination.

At that time bacteriology as a science was undreamed of, and knowledge concerning the most common etiological factor in disease production, bacteria, was yet to come; consequently Jenner could not assume facts in regard to the causative agent of small-pox or the active principle of his virus. Could he have done so, it would have allowed him to advance theories in regard to the manner in which immunity was conferred by vaccination and, as a result of these theories, to claim for the methods of preparation, care and use of his virus such a technique as bacteriology has shown us is essential in working with a material such as we assume this virus to be.

Bacteriology has not revealed the active principles of his virus to us, but it has made it possible for us to assume its nature with enough certainty to adopt definite rules for its preparation and application.

Although Jenner was not allowed the benefits of bacteriology, he had learned by observation of the action of his remedy for thirty years, that it was necessary to exercise care in its preparation and application in order to insure safe and reliable results. We find in his original paper (The Origin of the Vaccination Virus, by Edward Jenner, M. D.) such advice as this: "But when taken in a far advanced stage of the disease, or when (although taken early) previously to its insertion it be exposed to such agents as according to the established laws of nature, cause its decomposition, it can no longer be relied on as effectual. This observation will fully explain the source of those errors which have been committed by many inoculators of the cow-pox. Conceiving the whole process to be so extremely simple as not to admit of a mistake, they have been heedless about the state of the vaccine virus, and finding it limpid, as part of it

will be, even in an advanced stage of the pustule when the greater portion has been converted into a scab, they have felt an improper confidence, and sometimes mistaken a spurious pustule, which the vaccine fluid in this state is capable of exciting, for that which possesses the perfect character."

There are many physicians today who might improve their methods of carrying out vaccination by considering the paper from which I quote, although it was written a century ago. It was written in accordance with the best knowledge that Jenner had, and it is allowable for us to apply to his views, theories which the advance of science renders possible.

If, today, Edward Jenner was to bring to the world his discovery, he would assume that small-pox was an infective disease, the result of the invasion of the organism by a specific microbe; and that in the virus used to procure immunity by vaccination, he possessed a material, the active principle of which was either an attenuated form of this micro-organism or a product of its action in the cow.

"Vaccination appears to consist essentially in the artificial growth of a vegetable ferment in an animal, under circumstances unfavorable to its rapid multiplication."—Buist.

"Immunity is most frequently seen to follow the introduction into the body of the products of growth of bacteria that in some way or other have been modified. This modification may be artificially produced from the products of virulent organisms and then introduced into the tissues of the animal; or the organisms themselves may be so treated that they are no longer virulent, so that when introduced into the body of an animal they eliminate poisons of a much less vigorous nature than is the case when they possess their full virulence."—A. C. Abbott.

Pasteur began his researches on artificial immunity with the view that cow-pox virus was an attenuated form of small-pox virus, and that small-pox was a disease of microbic origin. As a result of experiments conducted under this belief, he was able to obtain vaccination virus capable of procuring immunity against several infectious diseases, notably hydrophobia. Others working with pure cultures of known bacteria have been able to establish methods of procuring immunity against many diseases, and the work has but begun. We are in sight of curative and preventive measures against tetanus, pneumonia, diphtheria, anthrax and tuberculosis, and even malignant growths are reported to have vanished under the influence of the streptococcus of erysipelas and its ptomaines. Pasteur conducts the preparation of his emulsions and the technique of their employment under a conviction that he is dealing with a material of microbic nature, and that in order to secure an action of his remedy, consistent with its nature, a method of procedure is necessary that will allow of little carelessness either in its preparation or its application.

Is the present method of vaccination in accordance with what is scientific and correct? Spend one hour in a Pasteur institute where inoculations are being made and observe the careful technique which the physicians in charge consider necessary to adopt, and then stand for an hour in the vaccinating room of the health department of this or any other city and observe the manner in which the vaccination is done. Why should one not be performed as carefully as the other? They are dealing with material of somewhat similar nature. Vaccination is not being performed at the present time in accordance with scientific teachings. We claim the same careful technique for the preparation and application of bovine virus as is granted the above agents.

As to the improvement of present methods:

1. We can assume that small-pox is an infective disease due to the invasion of the organism by a specific microbe, and that the active principle of Jenner's virus, which gives it its power to procure immunity for the individual inoculated with it, is due to the presence of an attenuated culture of this bacteria, or the product of its action upon organized tissues, animal or human, as the case may be.

This is theoretical—Specific microbes have been claimed for this disease but have not been demonstrated to be its causative agent. And for the virus that produces immunity; "it must be confessed that nothing was known as to the composition of the material by which typical vaccine vesicles are produced, until the researches of Weigert, Klebs, Cohn and Burdon Sanderson rendered it probable, if not certain,

that a "germ" was the active principle in vaccine lymph." (Buist.)

"The etiology of small-pox still remains undetermined. The common pus cocci, and various other micro-organisms are found in the characteristic pustular eruption, and various micro-organisms have been isolated from vaccine vesicles, but no one of these has been shown to possess the specific pathogenic power of unfiltered lymph from the same source.

"The experiments of Carstens and Coert show that the specific virulence of vaccine lymph is destroyed by ten minutes exposure to a temperature of 54° C.

"And the writer's experiments show that various disinfecting agents tested—chlorine, sulphur dioxide, nitrous acid—destroy the infective virulence of lymph dried upon ivory points in about the same proportion as is required for the destruction of some of the best known pathogenic bacteria.

"But this does not prove that virulence depends upon the presence of living micro-organisms, however probable this appears, for certain toxalbumins are likewise destroyed by a correspondingly low temperature, and by the action of various chemical disinfectants." (Sternberg.)

"The nature of the contagion of small-pox is still unknown. Weigert and others have described micro-organisms in the pock, but they are the ordinary pus-cocci, and the part which tney play in the affection is by no means certain. Still less definite are the observations on the occurrence of sporozoa in the pocks. It not a little remarkable that in a disease which is rightly regarded as the type of all infectious maladies, the specific virus still remains unknown.

"The precise nature of the vaccine virus is as yet unknown. Several forms of micro-organisms have been isolated, and Buist has cultivated micrococci which, he states, produces in the child a typical vaccine vesicle. Several attempts have since been made to isolate the virus, but without definite success. Ernst and Martin, of Boston, have isolated from the Bovine lymph, a germ which grows on culture media, and produces, when inoculated in the calf, or in children, characteristic vesicles." (Osler.)

The inability of bacteriologists to cultivate the essential microbe of vaccine lymph, Buist states, is due to faulty methods, and not to the mistakes of investigators. He says, "while, therefore, a bacteria of constant form, to be found in clear vaccine and variolous lymph, is probably the cause of variola and vaccine, it appears to be practically impossible to reproduce the same bacterial form by artificial cultivation of lymph in solid media outside the animal body."

The experiments of Buist have led him to conclude regarding the active principle of vaccine virus, that, "the bacteric form of the true vaccine contagion is to be found in the minute isolated spores of micrococci, which are suspended in standard vaccine lymph, and this form must be preserved in artificial vaccine materials; opaque vaccine lymph contains more mature bacteria forms developed from the spores in clear lymph and is to be regarded as a natural cultivation of the true vaccine contagion. The torulæ described in opaque lymph do not exist in clear lymph and their significance is doubtful, and most probably they represent a resting or reproductive stage of existence of the vaccine contagion. The vaccine contagion can be isolated and cultivated apart from the animal body, in both solid and fluid media.

"The pathogenic properties of the vaccine and variolous material depend on the embryonic and mature forms of bacteria which they contain."

2. Inoculation with pure bovine virus produces in a person not immune to small-pox, a characteristic reaction which demonstrates that immunity has been conferred upon the individual inoculated for an indefinite length of time.

The characteristic reaction is usually looked for in the local condition produced, but general symptoms may result from such vaccination.

"When clean vaccine lymph is properly employed, the resulting vesicle is plump, round or oval, and pearl colored, with an elevated margin and a depression or umbilification in its center; and it contains on the eighth day, or even earlier, a material which is identical in appearance and potency with that by which it was originally produced. On the eighth day the vesicle becomes surrounded by a rose-colored zone of inflammation, or areola, which continues to increase for several days, and the clear contents of the vesicle are then found to be opalescent or opaque. The establishment of this areola is re-

garded as a proof of the specific effect of vaccination on the constitution. From the eighth to the tenth day, the opacity of the lymph continues to increase, after which coagulation of the contents of the vesicle takes place with the gradual formation of a dry, brown scab by the fourteenth day. This scab becomes harder, dryer and darker during the third week, when it falls off leaving a depressed circular, or oval cicatrix, which is the natural termination of the process by which the majority of the human race are protected for a life time from small-pox. If such a termination to vaccination should be guaranteed with certainty, its beauty and symplicity could not be questioned."—Buist.

3. The virus (assumed to be due to specific bacteria, or the product of specific bacteria) may become contaminated by other micro-organisms, which will consequently be inoculated with it, and cause a mixed infection which may modify, inhibit or overcome the influence of the virus.

The channels through which the virus may be contaminated are so various that I can only hope to notice a few main sources. I shall not criticise individual manufacturers of virus. The majority of men engaged in the preparation of bovine virus, I assume to be conscientious. I shall simply speak of sources of infection, some of which I believe from reports of vaccine stations are not sufficiently appreciated. Manufacturers can hardly be censured when we consider the manner in which educated physicians carry out inoculations with the virus of their production.

The virus used to procure immunity against small-pox is either a pure culture of the essential cause of small-pox mitigated by having been passed through the calf, or it is a material containing a product of the action of the essential bacteria of small-pox in the tissues of the calf. That the former is true, we are convinced from the fact that filtered lymph has been proven void of the power to procure immunity. Accepting this theory, a pure virus is a pure culture of an unknown microbe, and is only pure when the essential microbe is alone present in it.

That the culture is often not pure in commercial virus, I am satisfied, although in the summary of results Buist claims that no other bacteria but the specific one of the virus will grow in the lymph. "My observations appear to show that when it is taken from a typical Jennerian vesicle, it is a material, in the contagion of which no second principle can possibly reside."

Buist obtained in his cultures a micro-organism of so many transitional forms, that the question of his having obtained a pure culture can be doubted, and hence he is not entitled to assume that but one microbe can be present and active in the material used for vaccination. That, theoretically, in a mixed culture the specific bacteria of the vaccine virus might be able to cope with and conquer the contaminating bacteria, is possible, but, practically, I am sure the opposite is often true and the contaminating bacteria prove the stronger. I feel certain that the virus dried on a point is absolutely unable to exert any combative influence on contaminating microbes which may be deposited upon it, as organic matter in a dry state is inactive. I believe that every one who has any part in the preparation of these points should have had some practical work in bacteriology, and should appreciate the care required to secure a pure culture of any bacteria, which, theoretically, must be accomplished to secure pure virus.

All the criticisms I have to make regarding the preparation or use of bovine virus points, concern methods which will allow of the virus becoming contaminated by micro-organisms other than the essential microbe assumed to be present in it and to be the essential factor in procuring immunity with it. Taking the steps in the preparation of bovine virus points in their order, we start with the points which are to be coated with the virus. The points to be inoculated from the vesicles must be aseptic or we have started wrong, and, of course, will fail in securing a pure virus. Such points are usually of bone—so called ivory points. To secure an aseptic condition of such material, it must be subjected to some anti-microbic influence. We assume it to be infected, as all material must be considered from a bacteriologist's view. The ideal method of sterilization, heat, cannot well be used with such a material, as the influence of heat, dry or moist, for a sufficient length of time, is detrimental to bone. Solutions of the recognized antiseptic agents, carbolic acid, or mercury

bichloride, or absolute alcohol, may be used. The first two have disadvantages in that they may remain in the material in sufficient quantities to inhibit or overcome the efficiency of the virus unless thoroughly removed from the points before inoculation. This, however, can be accomplished by careful rinsing with sterilized water. Absolute alcohol has the advantage of being a good antiseptic, and yet easily removed from the points by evaporation or rinsing with sterilized water. Absolute alcohol would, therefore, be a reliable method of preparing the material ordinarily used for points. That alcohol is a reliable antiseptic has been demonstrated by experimental research and clinical experience. Metal points would have the advantage of allowing disinfection by the only reliable sterilizing agent—heat, preferable in the form of steam under pressure.

Assuming the points to have been absolutely sterilized, there are great dangers of contamination from materials with which they may come in contact subsequent to their disinfection and during the processes they pass through before being sealed for shipment. The hands of the workmen would probably be the main source of such contamination. This source is worthy of consideration. Every day we notice great and learned surgeons—teachers of antiseptic surgery—who, although the most conscientious of men, will, during operations under so-called antiseptic precautions, overcome all the painstaking measures adopted to prevent infection by handling infected materials, never realizing the error, although perhaps at the same instant, addressing their audience upon the necessity of carefully carrying out all details in antiseptic methods in order to prevent infection. Knowing this, can we set aside the danger arising from the workmen in their care of the points, prior, during and subsequent to inoculation, even though the points are absolutely sterilized at the commencement. In many institutions a large number of points are placed in frames before being inoculated, and dried and all prolonged manipulation with the hands dispensed with. But simple contact is enough, and great care must be exercised even with the use of such frames. The workmen should wear a sterilized gown over their clothes, with arms bare, and hands and arms thoroughly prepared by antiseptic measures.

The virus used to coat the points may or may not be pure at the time it is applied to them. The part of the animal inoculated for the purpose of the vesicle production must be absolutely aseptic. All the care is necessary in this preparation that would be adopted in preparing an abdomen for a laparotomy. Shaving, green soap and sterilized water, and scrubbing with a brush, followed by a reliable antiseptic solution. The latter can be removed with sterilized water before inoculation. If such a surface is inoculated with a pure virus, with careful protection of the inoculation lesion from subsequent infection, which must be of great difficulty, we have some assurance that the vesicle produced may contain a pure culture of the specific germ.

The rooms in which the work is carried on, and the stalls in which the animals are placed should allow of frequent irrigations with antiseptic solutions. This is accomplished in some of the stations. But the greater danger, as in all infection, is from direct contact. The animals used for the purpose of virus production are selected with great care by the great majority of manufacturers. They realize the danger of carrying the contagion of tuberculosis and other diseases by the virus. Nevertheless, it is my opinion that this matter should be under close inspection by the government and not too much trust placed in private corporations.

When the vesicles are fully developed and the points are to be coated with the contained virus, nothing but sterilized substances should come in contact with the points or the virus, extraordinary care being taken by the workmen in the antiseptic preparation of their hands. The subsequent packing of the coated points in sterilized tubes of glass closed by sterilized corks, will enable the manufacturer to feel that he has carried out a method of preparation in accordance with the teaching of bacteriology.

If the point leaves the manufacturer in a pure condition, the subsequent condition of the virus and the result of the inoculation lie in the hands of the retailers and the one who uses them. We will simply mention the manner in which these points are retailed by druggists everywhere. Step in a drug store and buy one point, and one will need no words to be convinced that nu-

merous portals for the invasion of contaminating bacteria are opened during the procedure. Drug clerks and the laity who purchase these vaccine points and use them upon themselves and each other, may not be responsible for their ignorant mistakes, but educated physicians should realize that in making use of this most important prophylactic agent they are using material of some delicacy, and should adopt methods for its employment in keeping with the teachings of the day. They know, or should know, how to prevent contamination of vaccine points, and how to carry out the technique of vaccination in a manner that will allow of an inoculation with a pure virus, by the preparation of the site of operation, the use of sterilized water to moisten the virus and a protection of the scarifications from infection throughout the progress of the local lesions. The disinfection of the part should be by the thorough use of soap and water with brush, sponging with absolnte alcohol and then with sterilized water.

No antiseptic should come in contact with the virus, as the active principle is undoubtedly of a nature to be inhibited or made inactive by such substances. The part should be protected, subsequent to inoculation, by some aseptic material which covers but does not touch the scarifications. A sterilized bunion plaster to keep the protecting aseptic gauze from touching the scarifications, the whole dressing kept in place by a strip of adhesive plaster is simple and valuable.

4. The use of impure virus may lead to faulty assurance that immunity has been conferred, from the fact that the contaminating micro-organisms may, by exciting their specific pathogenic properties on the parts inoculated, produce a local lesion which may be mistaken for a typical vaccine reaction, when in reality the vaccine virus itself has been entirely void of any influence whatever.

This is frequently the case, and may mean much or little to the individual or the community according to circumstances. That Jenner knew such mistakes were possible is evident from his own words: "For I now discovered that the virus of the cow-pox was liable to undergo progressive changes from the same cause precisely as that of the small-pox; and that when it is applied to the human skin in its degenerated state, it would produce the ulceration effects in as great a degree as when it was not decomposed, and far greater, but having lost its specific properties, it was incapable of producing that change upon the human frame which is requisite to render it unsusceptible of the *variolous contagion.* So that when it became evident a person might milk a cow one day and, having caught the disease, be forever secure, while another person, milking the same cow the next day, might feel the influence of the virus in such a way as to produce a sore or sores, and in consequence of this, might experience an indisposition to a considerable extent, yet, as has been observed, the specific quality being lost, the constitution would receive no peculiar expression."

5. There is practically no danger in vaccination with a pure virus, but contaminating micro-organisms may be the immediate cause of danger to the part, or the life of the patient.

It is not necessary to insert any cases reported of the evil results following vaccination. They are more or less frequent and few are reported In comparison with the number of vaccinations produced, the evil results of a grave nature are very few. But erysipelas, prolonged ulceration, lymphangitis and suppurative adenitis are not uncommon, and a number of cases of tetanus have been reported. The danger of carrying syphilis has passed with the adoption of bovine virus, but tuberculosis is possible with this material. The fact that cases of serious infection are few does not lessen the responsibility of the physician if, by his negligence, a case occurs. It is his duty to make the few impossible. Considering the total number of hours lost from business, the discomfort and pain suffered by patients, the number of cases sent into the dangers of contagion with the assurance that they are protected by a vaccination which has been valueless as a protective measure, and the cases of death caused by vaccination with a contaminated virus, all of which could have been avoided if everyone connected with the preparation of the virus and its use, had made practical applications of the teachings of bacteriology, the advantage of which physicians of the past could not avail themselves but which at the present time we are masters of, I think the subject is one of real practical importance and worthy of serious reflection.

COMMUNICATIONS.

ICTERUS FROM EMOTIONS.*

PROFESSOR PONTAIN, PARIS, FRANCE.

We have at this moment in the hospital, two patients affected with icterus. The one is a rheumatic male patient with a catarrhal icterus; therefore we thought that anti-rheumatic treatment might be of service in his case, and after being for several days under the salicylate of soda, he has become convalescent. The other is a young woman who is not rheumatic, and who attributes her jaundice to a violent fit of anger. Her case may be classed among those cases of icterus which follow emotions.

In this variety one will meet with cases where the jaundice followed immediately after the emotion upon which it depends; in others, as in our patient, the affection is only noticed a few hours or one or two days after. Is the mechanism the same in both cases? Often emotional icterus is accompanied by causes capable in themselves of producing the disease, so that for a long time it was thought to be a mere coincidence or a ridiculous tale.

Still there are cases where the influence of the causative emotion is not to be doubted. I have reported to you several cases of instantaneous icterus. You recall Bouillaud's case: A man was about to shave himself. Suddenly some one comes and informs him of a loss which he has suffered; on taking up his razor he perceives in the mirror that he has become jaundiced. I have already mentioned the case of a young girl who went into a cellar and was unexpectedly bitten by a rat; very much frightened she ran out and was met by a person who noticed that she was icteric. Another case was that of a man who was seized by the Federals and was about to be shot; his wife, who was present, remarked that he immediately became jaundiced when the troops arrived from Versailles and saved him. It is told of a duellist, who, upon the duelling ground, in a twinkling of an eye became so yellow that the weapon fell from the hand of his adversary. Again, a man received a box on the ear; he precipitated himself furiously upon his opponent; he was at once arrested, when it was noticed that he was completely yellow. Still another case was that of a young priest who was present while a mad dog was to be shot; at the moment that he was struck by the bullet, the animal gave a bound into the air, broke his chain and expired at the feet of the priest. The latter, terribly frightened, fell to the earth and arose completely icteric. These are all authentic cases.

Often the icterus does not follow at once. In 1882, I observed at the Necker Hospital, a young girl, who had had a violent fit of anger; several hours after her eyes began to grow yellow and she became progressively icteric. In one case, a woman of thirty-one years had an attack of icterus eight hours after an accident. A physician of Montpelier has recorded the case of the interne of a hospital who was frightened by a comrade who played the part of a ghost. The interne was terrifically frightened by the apparition; the next morning he was jaundiced. The case of a young girl near Bordeaux has been observed, who, impressed with the reproaches of her father, a few hours later became icteric. Dr. Noblet has reported the case of a woman, who, while assisting to unload a wagon loaded with potatoes, all at once saw the man standing in front of her buried under an avalanche of potatoes; she experienced a vivid emotion; the next morning jaundice appeared. Finally, Hardy has called attention to the case of a young hackdriver who allowed his horse to run away; the following morning he was icteric.

An emotion is frequently found to be the cause of icterus, but the importance which it merits has not been attached to it. The nature of the emotion is variable; most generally it is terror. Sometimes, as in our patient, it is a fit of anger. Let us see by what mechanism the icterus is produced.

Instantaneous icterous is easily explained

* A clinical lecture delivered at the Hospital de la Charite, Paris, France. Translated from *L' Union Medicale*, No. 70, 1894, by F. H. Pritchard, M. D.

by the modifications of pressure between the capillaries and the small bile ducts. Normally the pressure in the bile ducts is greater than in the blood-vessels; in animals even without icterus this may be observed. But the biliary pressure is variable, for experiments have not yet given us exact knowledge on this subject. At all events, if the pressure in the ducts be increased the bile rapidly passes into the blood.

You will observe that if one tap the abdomen of a frog with the handle of a scalpel, the blood-vessels will become enormously distended; all the blood of the periphery seems to rush to the abdominal cavity. The same result may be produced by excitement of the cortical nerve centres, as Frank has demonstrated. Thus there is a lowering of the blood pressure in the capillaries of the liver, while at the same time there is an increase in that of the bile ducts and their capillary ramifications. Not every violent emotion is followed by icterus, but as I have stated, the pressure in these ducts is quite variable, now high, now low, and now negative. It is easily seen that if the variations in the blood pressure are to occur when that of the bile is high, icterus immediately follows. Yet these modifications of pressure are by no means all, for, as Laborde has shown, the biliary passages are contractile; any excitation will produce a slow retraction of their walls, with consequent elevation of pressure. Lepine, after introduction of a tube and a manometer into a bile duct, has observed the pressure to rise in a few minutes under the influence of excitement. If every emotion does not give rise to these effects it is because of a reflex influence. Now, reflexes are variable. They may act upon one part or another, they may be diffused, but they especially affect sensitive organs. Instantaneous jaundice has nothing mysterious about it, and is easily explainable.

The same cannot be said when the symptom follows a more or less long time after the emotion. It cannot be explained by spasm, for that would not last so long; again, vascular paralysis which allows the vessels to become distended, only produces a momentary lowering of pressure. Here it rapidly rises from repletion of the vessels. Other causes must be sought for. Now, if one study attentively the cases where the icterus appeared later, one will observe that between the casual emotion and the consecutive icterus the patient presented symptoms of gastric disturbance, loss of appetite, diarrhœa or constipation, headache, pain in the limbs and malaise.

This condition brings about an icteric state from infection of biliary passages, from consecutive tumefaction of the mucous membrane of the ducts even sometimes by production of a mucous plug at the point of entrance of the common bile duct into the duodenum.

But, how is it that an emotion may give rise to a gastric disturbance? This is a fixed fact and you know that prolonged chagrin often causes a loss of appetite; that fear may induce a diarrhœa, etc. An explanation of these facts is a very delicate task. The nervous system affects the movements of the digestive tract, at one time it may accelerate, at another render slow; thus it regulates the circulation and even the secretions of the intestines. Now, the gastric disturbance which produces the icterus is an infectious process, a fact which Chauffard has emphasized. It often appears as an epidemic, local epidemics, domiciliary epidemics. At other times the season exerts a manifest influence. What relation can there exist between an emotion and an infection? Here we return to the astonishment which physicians experience at the beginning of their bacteriological experiments. The relation actually exists and is to be explained. The intestinal tract is filled with injurious substances and microorganisms ready to invade the system; but, during the normal state, the intestinal glands, the bile ducts and the bile itself are aseptic. This condition of things is subject to modification. The glands and ducts may become infected. It seems that the more abundantly a gland secretes, the less liable it is to microbic invasion. Now, the secretions are regulated by the nervous system and this same system may prepare the way for infection. I have, unfortunately, no case in point to cite you, yet this hypothesis appears to me quite rational. As to the biliary passages, they are kept normal by the profuse flow of bile, for the quantity of this fluid which traverses them in twenty-four hours is not less than the quantity of urine which passes through the kidneys at the same

time. The bile itself is antiseptic. Rendu has recently given us a curious example. A patient presented grave hepatic symptoms which led one to think an abscess of the liver present. At the necropsy multiple abscesses were found in the liver, but they were aseptic. The biliary passages were filled with streptococci, but they were inoffensive. Both the inoculations and the cultures remained sterile. Hence the bile may render microbes sterile. Yet this antiseptic property is not always the same. You thus can see how an emotion may be followed by no effect or the very contrary. By transitory and mechanical modifications in one case; by an infectious process in an other. By symptoms limited to the stomach and intestine in one series of cases, while in others they extend to the biliary passages and are followed by icterus.

Again, you see how the prognosis is not always the same. Instantaneous icterus of emotional origin, ordinarily, lasts for five or six days. I know of no case of primary emotional icterus which was followed by severe results. But it is not the same in catarrhal icterus, for a secondary emotional icterus acts quite like the catarrhal variety. In certain cases the two influences are combined and the primary icterus continues as a catarrhal form; this latter may become serious. Examination of the urine in these cases is of considerable importance, for it indicates when the bile ceases to pass over into the blood. In our patient, the color of the stools indicates that the bile is being poured into the intestine, but, the presence of biliary pigments in the urine shows that a certain portion is actually taken up by the blood, and the patient is not yet convalescent. That forms one of the important elements in prognosis. But the state of the kidneys should be especially watched for albumen, and a large quantity of casts are met with in a great number of these cases. A diseased condition of the kidneys is always, in these affections, a source of danger from insufficient elimination of the waste products of the organism. Emotional icterus only becomes serious in those patients whose kidneys are affected beforehand. Catarrhal icterus, as a rule, does not last long enough to cause secondary alterations in the kidneys. Treatment will vary as the icterus is primary, or secondary to gastro-duodenal catarrh. Primary icterus will cure itself if the patient is in a tranquil state of mind. At the hospital, the mere fact of their entering and the consequent repose are sufficient treatment; in city practice one should be on the watch for exciting causes and to remove them. Emotional secondary icterus is treated by laxatives, especially castor oil, and exclusive milk diet. This form of diet diminishes considerably the number of microbes in the digestive tract. But in some patients the digestion is faulty and fatty foods are especially badly assimilated. Here an association of pancreatine with the other measures will render great service.

MEDICAL TUBERCULOSIS.*

HUGH HAMILTON, M. Sc., M. D., Harrisburg.

Medical tuberculosis is limited by the exclusion of those cases which by surgical interference can be relieved.

Presuming that the constant factor of tuberculosis is the bacillus tuberculosis, its bacteriological determination is essential for the diagnosis of the disease. Having now indicated the field of the subject, it becomes easy to discuss briefly the several forms that demand treatment. The almost invariable presence of the bacilli in those afflicted with phthisical complaints makes one wonder if the bacillus tuberculosus is the universal cause of this fatal condition of the human organism. The system is effected with more or less rapidity not always in accordance with the physique of the individual.

The studies of Koch brought out an immense amount of information, although his original purpose was frustrated and his benevolent hopes unrealized, yet the publication of his postulates stimulated extensive and active research with sure

* Read before Medical Society of the State of Pennsylvania, 1894.

principles upon which to formulate methods of treatment. A digression is made at this point into some of the effects of bacteriological growth and products. The simple growth of vegetation requires heat and moisture. The fungi bacteria require heat and moisture. They secure it at the expense of the normal physiological function that necessarily produces pathological physiological performance. This pathological condition is noted by irritation that shows its presence by sensitive degrees of febrile movement.

The alteration of the albumin present in the body into forms (chemical formula), which before the introduction of germs (bacilli) were inoxous, become through its parasitic existence, toxic—even to the bacterium itself. The object of germ life is to perform a vital cycle—probably best illustrated in vinegar, which live in great numbers in cider, by the germs and by their presence and animation change the saccharine material, through the alcoholic, to the acetous fermentation.

The process of making bread by yeast is another familiar illustration of this fact, stopped in its process by baking heat. Domestic wines are made this way, by stopping the fermentation in the alcoholic stage. Now observe that both *vinegar* and *alcohol* are antiseptics, preserving from decay vegetables and flesh.

Now the product of certain bacteria are *indol* and *phenol*—"antiseptics" we call them—should they in their cycle of living produce these by-products beyond the normal, they would cease their active career, provided no new albumins were offered for their consumption.

The *Tuberculin* treatment of tuberculosis disturbances in the coarser tissues was to a degree successful. Was it because those muscular tissues were firmer and changes in them slower? The application of these by-products locally in lupus, etc., had singularly fair results. In the lung tissues of a finer and more delicate character, it was impossible to reach the nidus of disease without also exciting an intense influence upon the general system. Whether the balance of the by-products to the life of the bacilli in lupus was so disturbed as to destroy the bacillus tuberculosis, remains beyond my ken—but it is a thought.

An alga in water previously used by an alga dies from its constantly used supplies of nourishment, and the excretions or by-products of its existence. Analogically, an animal would die in a closed vessel from the inhalation of his own exhaled carbonic dioxide—a by-product.

The art of Japanese horticulturists that produce dwarf, undeveloped fruit trees is well known. Can we stunt or stop the growth of these parasites by cutting off their supplies? We have succeeded in surgery to such an extent that the continuity of healthy tissue is separated and repaired at pleasure by following the simple rules of modern surgical practice. There is no pus in pure surgical interference. "Healthy pus!" who ever hears that phrase now?

Strumpel, measuring the irritation in consumptives, from the febrile movement observed in thermometic records, divides them into five classes:

CLASSES.	MORNING.	EVENING.
I. Sub-fever	N	100.4 to 101.3° F.
II. Hectic intermitt.	N+	101.3 to 104.
III. Remittent	100.4-101.3° F.	103.1 and upward.
IV.	Continuous	Fever.
V.	Irregular	Fever.

When we change the climate by altitude or latitude, *i. e.* returning the individual to his geographical place, we allay the ravages of the bacilli for a time.

We attempt and succeed when we send persons to the dry Colorado plains or the altitudes covered by balsamic pines. Where these are not possible, the application of the several essential (odorous) oils or their acid derivatives inhaled regularly, with generous diet and discipline of the general habits, we find an average rising from 50 to 80 per cent. benefitted and have their lives prolonged. The United States is rich in varieties of climate suitable for persons with pulmonary disease.

Respecting the contagiousness of tuberculosis there can be no question. The German police ministry promulgated detailed orders in 1891, which have been copied; and we are now agitating the populous cities of New York and Philadelphia to adopt them. The enforcement in Germany of this proclamation has already attained gratifying results; and the next twenty years will testify to its great wisdom. Compulsory vaccination has almost eradicated variola from the schedule of the national calender diseases of Prussia.

To sum up this matter:

1. Bacteriological diagnosis of the disease is essential.
2. The pathological process offers inducements of success in germicidal local treatment—which has succeeded so efficiently in modern surgery.
3. That the febrile movement should be diligently studied, both without and with active treatment, as insisted upon by Strümpel.
4. That climatic and sanitary conditions are necessary in the *whole* individual.
5. That every effort toward preventing the dissemination of *dried* sputum should be used.

TRANSLATIONS.

THERAPEUTICAL SUGGESTIONS FROM FOREIGN JOURNALS.*

RECTAL INJECTION FOR DYSMENORRHŒA.

Dr. C. von Rokitansky (*La Semaine Mèdicale*, No. 48, 1894) recommends as a useful measure, the following rectal injection in dysmenorrhœa:

℞ Extr. Opium..... o | 05 (gr. ¾,)
Powdered Camphor..... o | 30 (grs. v.)
Yolk of One Egg.
Water.....150 | o (℥iv. ℥v.)

Sufficient for one injection.

GLYCOSURIA AFTER CHLORALAMIDE.

Dr. C. Manchot (*Hospitals-Tidende* No. 26, 1894) has for a year examined the urine of all delirious patients at the Hamburg-Eppendorf Hospital, who received chloralamide in doses larger than three grams and whose urine was before free from sugar. In 214 cases there were 54 whose urine contained sugar. Out of 76 who received six grams a day the urine of 6 contained sugar; in 45 out of 135 who took nine grams, and in 2 patients who received twelve grams, per diem. The sugar persisted in the majority of cases from one to three days, once nine days, while sometimes it only lasted for a few hours. The quantity varied, but a combination of the fermentation and polarization tests found in twenty-one of thirty-six carefully examined cases, 0.2 to 0.5 per cent.; nine times up to 1 per cent.; five times 2 per cent.; once 2.2 per cent.; in one single case five per cent. was discovered. (352.8 grams, per diem). This patient has received six grams a day and had glycosuria for three weeks but recovered completely. Patients who had once presented glycosuria after the drug were easily liable to suffer from its repeated use; yet others on the contrary were free. Therefore there must be an individual predisposition. All these patients were alcoholists. Experiments on rabbits demonstrated that a daily dose of two grams would give rise to transitory glycosuria.

SUBLIMATE IN DIPHTHERIA.

Dr. Raubitschek (*Norsk Magazin for Laegevidenskaben*, No. 1894.) advises, in the treatment of whooping cough, the local application of 1 per cent. solution to the base of the tongue, tonsils and fauces. A tuft of cotton is dipped first into the solution and the fluid pressed out at the root of the tongue so that it runs down over the epiglottis and adjacent parts. In ordinary cases the proceedure may be repeated every other day, in grave cases every day. In fourteen cases where this method was tried, including three of his own children, of two to eight years, rapid improvement and a cure followed in a few days. There is no danger of poisoning. (?).

FALLING OUT OF THE HAIR AND TRICHOPHYTIASIS.

Dr. Brocq (*Le Progrès Mèdical* No. 16, 1894) recommends in falling out of the hair and trichophytiasis, the following prescription:

℞ Carbolic Acid,
Chloral,
Tr. Iodine, āā..... 100 | o (℥iij ℥j)

Apply locally every week once, in falling of the hair; in trichophytiasis, three or four times a week.

*In charge of the Translator, F. H. Pritchard, A.M., M.D.

TREATMENT OF THE OBSTINATE CONSTIPATION OF CHRONIC TUBERCULOSIS OF THE PERITONEUM, INTESTINES AND MESENTERIC GLANDS IN CHILDREN.

Dr. Th. Escherich (*La Semaine Médicale*, No. 47, 1894) speaks highly in the treatment of the associated chronic constipation of chronic tuberculosis of the peritoneum, etc., in childen, of the following formula :

℞

Sulphate Atropine..	0	003 (gr. 1-20).
Water.....	100	0 (℥iij ℈j).
Gum mixture	20	0 (℥v).

A teaspoonful twice a day.

To obtain the desired effect this mixture should be continued for a long time; if necessary, it may be associated with a purgative. It is a matter of course that during its administration the pupils should be carefully watched.

TREATMENT OF TAPE-WORM IN ADULTS.

Dr. Léméré (*Le Mercredi Médical*, No. 32, 1894) praises the following formula in the treatment of tape-worm in adults :

℞

Ethereal Extract Male Fern	6	0 (℥jss).
Calomel.....	0	60 (grs. ix).
Distilled Water.....		
Gum Syrup.....	16	0 (℥iv).

Powdered Gum Arabic q. s. to form an emulsion.

To be taken at one time, in the morning, shaking well before taking. Keep the patient absolutely quiet and on a milk diet for twenty-four to thirty-six hours before its administration.

The worm will be expelled, without any disagreeable sensations, in thirty to thirty-five minutes after taking the remedy.

In children of six to twelve years the dose is four grams (℥j) of the extract of male fern and forty centigrams (grs. vj) of calomel.

TRAUMATIC EPILEPSY CURED BY IODO-MERCURIAL TREATMENT.

Dr. Dougall (*La Semaine Médicale*, 47, 1894) has obtained a complete and definitive disappearance of epileptic attacks of traumatic origin, in a child of twelve years, by the following formula:

℞

Sublimate.....	0	12 (gr. j¼).
Iodide Potash.....	7	50 (℥vj grs lij).
Infusion Gentian.....	180	0 (℥v)

One teaspoonful after each meal.

For ten days the child took three teaspoonfuls every day, after which the dose was doubled. A cure was obtained in six weeks.

DIURETIC AND HEART TONIC FOR CARDIAC INSUFFICIENCY.

In the *Revue Internationale de Bibliographie Médicale*, No. 11, 1894, the following formula is offered as an efficient diuretic and heart tonic, in cardiac incompetence:

℞

Infusion Juniper.....	300	0 (℥xj).
Acetate Potash	250	0 (℥ viij).
Powdered Digitalis Leaves	60	0 (℥j¼).
Powdered Squills	30	0 (℥j)
White Wine.....	240	0 (℥vijss).
Rectified Alcohol.....	30	0 (℥j).

To be taken by the dessertspoonful.

AN ANTIDOTE TO HYDROCYANIC ACID.

Dr. J. Antal (*La Semaine Médicale*, No. 48, 1894,) states that the nitrate of cobalt is a very efficacious antidote to hydrocyanic acid. In a watery (½-1 per cent.) solution it has the advantage not only of neutralizing the acid in the stomach, but also that in the blood. Even if taken in large quantities is absolutely harmless. This salt of cobalt is eliminated from the organism as rapidly as it is absorbed from the stomach. In case of poisoning by this acid he would advise, basing himself upon experiments on dogs and rabbits, subcutaneous injection of twenty to thirty ccms. of a ½ per cent solution of the cobalt salt, while it may be drunk by the glassful.

APOCYNUM CANNABINUM IN HEART DISEASES.

Dr. Glinski (*Gazzetta Degli Ospedali*, No. 82, 1894,) by experiments on animals has found that the root of apocynum cannabinum contains a violent poison, which, in large doses, paralyzes the heart, and, in small quantities retards and strengthens its beats. Basing himself on these results he experimented upon himself, for he suffered from hypertrophy of the left ventricle, with intercurrent attacks of dilatation of the heart, mitral murmur, dyspnœa, etc. He then took fifteen drops of the fluid extract, three times a day. Having observed that all of his symptoms disappeared in two days, he experimented on other cases having palpitation and disturbed compensation, where strophanthus and adonis vernalis were without result and digitalis seemed contraindicated. He reports the details of his cases and concludes as follows:

1. Apocynum cannabinum root appears

to have an action similar to that of digitalis, without cumulative action.

2. In cases of dilatation apocynum rapidly diminishes the area of dullness.

3. It increases the quantity of urine, causes the palpitation to disappear, and promotes the absorption of exudates.

4. Beyond a sensation of increased pulsation in the arteries of the head, he has observed no disagreeable effects.

It may be used as a decoction, three or four spoonsful a day; the tincture (1:40) five to ten drops, three or four times a day; or, the fluid extract, in a dose of ten to fifteen drops, three times a day.

ERUPTIONS FROM IODINE.

Dr. Szadek (*Gazzetta Degli Ospedali*, No. 82, 1894,) distinguishes five forms of iodic eruptions: the erythematous, the papulo-pustular, the bullous, the tuberous and the hemorrhagic.

The erythematous form is characterized by extensive desseminated areas in various regions of the body, particularly on the forearms. If the iodine be continued it may become transformed into the papular variety, which, with the pustular eruptions, is usually observed on the face and scalp; it greatly resembles that following the bromides, except that the confluent form is very rare.

The bullous variety is observed as large disseminated bullæ upon the head, face, neck, extremities and trunk. If the drug be continued, and especially in large doses, the bullæ takes on a purple-reddish color, and become filled with sero-pus, mixed with blood.

The tuberous form is not different from urticaria and erythema nodosum, but it is more striking and less circumscribed in large and elevated nodes. It is localized chiefly on the head and lower estremities. This form sometimes passes over into the ulcerating variety.

The hemorrhagic form as a rule is not severe and is situated upon the legs. Generally, it develops at the beginning of the treatment and it may follow small doses.

The writer has observed two peculiar cases of iodic exanthem. In one the eruption consisted of large and disseminated elevations and bullae, upon the extremities; in the other hemorrhagic exanthem was produced by small doses of the iodide and was upon the trunk and extremities. The variability of the iodic eruptions renders their diagnosis difficult. All the lesions usually disappear a few days after discontinuance of the drug.

TREATMENT OF OBESITY BY THYROIDIN,

Dr. Yorke-Davies (*Hospitals-Tidende* No. 32, 1894,) in a number of patients under treatment for obesity, where the usual measures were unsuccessful—exclusion of fatty and increase of nitrogenous foods—treated them with the extract of thyroid glands. He administered three tablets a day, with the following result: One patient, who with dieting alone, only lost two and three-fourths pounds, under the thyroid extract, in two months lost twelve pounds. Another lost with diet alone, in one month, three and a quarter pounds; under the extract, in six weeks, nineteen and one-quarter pounds. A third lost, in a month, six pounds; under thyroid treatment, in the same time fifteen pounds. A fourth, in three weeks six pounds; with thyroid extract, in the same time, twelve pounds. A fifth, in two months, with dieting fifteen pounds; in three months with thyroidin, twenty-seven and three-fourth pounds. Finally, a sixth patient, with diet, in two months, fourteen pounds; with thyroid extract, in a month, eight pounds. (Dr. Dale James *British Journ. Dermatology*, June, 1894, has reported glycosuria with nervous depression and frequent attacks of cerebral congestion, after the use of thyroid extract in an inveterate case of psoriasis: Polyuria has also been frequnetly noticed.—ED.)

Cutaneous Absorption. (Fubini and Pierini.)

The various experiments done by the authors goes to show that the healthy skin does not absorb non-volatile substances. After an immersion of both arms and forearms for half an hour in five per cent. solutions of sodium salicylate, and five per cent. solutions of potassium iodide, the urine contained neither salicylic acid nor iodide. The posterior extremities of guinea pigs were immersed for one hour in a two per cent. solution of nitrate of strychnine and a 1 in 400 solution of sulphate of atropine without strychninic symptoms, and without mydriasis.—*Canadian Practitioner.*

THE MEDICAL AND SURGICAL REPORTER

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SATURDAY, SEPTEMBER 15, 1894.

EDITORIAL.

PRIVILEGED CONFIDENCES.

Judge Cole, of the Supreme Court of the District of Columbia, recently rendered a decision holding that physicians and lawyers, when called upon in court, are not exempted from giving testimony on the ground that such information was professionally confidential.

Think of it! A learned judge compelling the violation of sacred honor, to obtain, forsooth, some evidence in a *divorce suit*. The subject will bear consideration.

The usefulness and good repute of the physician is based upon his worthiness of trust, the care with which he keeps his own counsel and the secrecy with which he preserves the confidences of his patients. No matter what may be his technical skill, if the physician fails in that good faith which preserves inviolate those communications made by his patients in all confidence, and which are indispensible to the performance of his professional duty, he will lose his good name and usefulness in the community in which his work lies, and will be disqualified for successful work in the profession in which trustworthiness and the keeping sacred of confidential communications is the one potential factor of success.

The extent to which these communications are and should be privileged by law, is of interest to the medical profession.

At common law, information given in confidence by the patient to a physician is not privileged; but in various States communications made by a patient to his physician or surgeon, and information acquired by him while attending a patient in a professional capacity, and which were important to enable him so to act, are protected by statutes. The privilege extends to facts necessary to enable the physician to prescribe. Such facts are privileged whether learned directly from the patient himself or acquired by the physician through his own observation or examination.

The object of these statutes seems to be to place the communications made to physicians in the course of their professional employment, upon the same footing with communications made by clients to their attorneys in the course of their employ-

ment. They protect with the "veil of privilege whatever, in order to enable the physician to prescribe, was disclosed to any of his senses, and which was in anyway brought to his knowledge for that purpose." Whenever evidence comes within the purview of these statutes, it is absolutely prohibited. Death does not remove the seal of secrecy from the communications and disclosures which the patient makes to his physician.

Until protected by statute, courts cannot exercise judicial power in forbidding the disclosure of confidences held secret by physicians.

In criminal cases the law is not well settled. In some of the States, as in California, the provision is expressly limited to civil cases. In New York the privilege of such confidences is extended to criminal cases. The following New York Supreme Court decision is one accepted as authority in that State and is frequently quoted in interpretation of the statutes of other States. In this case the Supreme Court (Landon, judge) gives the history and the law governing in the case as follows:

"On the night of the 18th of June, 1888, the defendant called upon Dr. Crounse, a person duly authorized to practice physic and surgery, and employed him to attend Mary A. Brower. The defendant was urgent. The doctor testified that upon coming into his office the defendant said:

"For God's sake hurry up, my wife has a fit, or fainted or something, I don't know what." He said: "Probably you would like to know what the difficulty is before you leave the office."

I said, "Yes, it might be a help to me because I might need something that I would not take with me."

He said, "This lady down to the house I am living with, I am not married to, but expect to get a divorce from my other wife and get married. This lady is about three months gone in the family way and she introduced a catheter, with a wire, in her womb, and after she had introduced it far enough to hurt her, I blew in it.

I said, "What did you blow in it for?"

"I done it before and it worked all right."

The doctor found the patient in a dying condition, and she died in about half an hour.

Two physicians who made the autopsy, testified that, in their opinion, the woman died from shock caused by the injection of air into the uterus. Aside from the testimony of Dr. Crounse there was no evidence tending to connect the defendant with an operation to procure miscarriage."

In rendering a decision in this case the Court said: "The defendant employed the physician to try and save Mrs. Brower's life. His alarm and anxiety were great. He knew what had taken place, and suspected that it was the cause of her sudden prostration, and felt that the physician ought to know it and to govern his treatment accordingly. The physician did want to know. In this critical moment, with the sole purpose of saving the woman's life, he disclosed the secret to the physician to make him to act rightly. To have withheld the disclosure would have made the defendant a consenting party to the woman's death. We have no doubt that the statute, both in its letter and spirit, protects the confidence thus reposed in the physician and forbids him to betray it."

With this testimony stricken out there remained practically nothing to sustain conviction.

The strict construction by the court of the statute would seem in this case not to have served the ends of a strict justice. Carefully studied in all its bearings the wisdom of the decision is clear. As human affairs run no statute, no matter with what wisdom framed, can meet all

and every exigency or be free from certain ultimate evils.

Many of the States, Pennsylvania among them, are without such a statute.

The greater portion of our legislation is the work of lawyers—they are the framers of our statutes, and they follow but a very natural human tendency when they frame them in the interest of their profession. Unfortunately the extent of this character of legislation is not limited to privileged communications. There is better logic, there are more sound reasons of public policy in support of privileging the communications to physicians, than can be advanced for the protection of the confidences of client and attorney. Not but that they too, for very strong reasons of public policy, should be privileged.

Aside from reasons of *policy*, there are the strongest of *ethical* reasons that the confidences between patient and physician should be protected. The relation of physician and patient is a peculiar one, and, from its very nature, requires absolute confidence. He is the trusted custodian of individual and family secrets and he cannot without breach of high moral obligation divulge them. The law should not step in and unseal his lips and force him to give information gained in the privacy of the sick room and under the stress of disease. If in exceptional instances such information promotes the ends of justice, as a rule it works mischief and injustice.

In this connection the example set by the Legislatures of a number of the States is a good one. It is but simple justice to physicians and surgeons that these confidences, which are inseparable from their very relation to their patients, should be respected and protected by the law. If such a law is in accord with sound public policy and serves the ends of public justice in the great state of New York and in other States, it would do same in Pennsylvania. The information gained by the physician from his patient is needed for the intelligent discharge of his duties, is given in one of the most intimate of human relationships, and the law should forbid its being heralded to the world by being testified to in open courts and spread upon public records. It is not a matter that can safely be left to the discretion of courts, however enlightened many of them maybe in the equities, the principles of public policy and justice, and the proprieties and ethics of the profession. Such practice multiplies conflicting precedents and leads to the confusion, rather than the simplifying of the law.

There is no class of men in any of our communities who do more to protect society against the wicked and forbidden practices of the depraved and criminal, than do physicians. They have an interest in the moral welfare of communities as well as in the physical health. Moral disease, with its contagions, comes as close home to them and their families as to others of the community. Therefore it is no argument that protecting the confidences between the physician and his patient would tend to shield crime.

The confidences existing between the physician and his patient have as strong grounds, as logical reasons for legal protection as privileged confidences, as have those existing between the attorney and his client, and there is nothing our law makers would so strongly and bitterly resent as a betrayal of the confidences *they* are forced by conditions to repose in their physicians. Such exposures would blast many a political career.

Suppositories for the Treatment of Chronic Constipation in Infants.

DR. STARR.

℞ Extract of belladonna..... .... gr. ss
Aloes..... gr. x
Cocoa butter..... ʒ jss

F. S. A. 12 suppositories.—1 or 2 suppositories to be introduced daily.

ABSTRACTS.

NOURISHMENT IN ACUTE AFFECTIONS.

ALFRED K. HILLS, M. D., New York.

If we would succeed in the treatment of diseases in general, we must take into account the fundamental principles upon which all organic life must depend, viz., the pabulum upon which the tissues are fed, and the varying circumstances under which the functions are affected by the various elements known as foods.

In our daily practice we are constantly met with the question: "What shall we give the patient to eat?" and its solution is sometimes a difficult one.

Naturally, the patient, the friends and the nurse all look to the physician to give explicit directions as to what articles of food are proper in a given case, just how it shall be prepared, and the frequency with which it shall be administered.

The form in which we shall offer nourishment to our patients acutely ill is of the first importance, after deciding as to the kind required in the particular case, and its suitable preparation is next in consequence.

It is absolutely necessary that the physician should not only be able to select the kind required, the form in which it should be exhibited, but he should also know how to prepare it, and be able to give intelligent directions to a suitable person to perform this service in a manner acceptable to the patient, who may be whimsical and difficult to please.

It does not matter particularly how we may classify our articles of food, so long as we bear in mind that *water* is of prime importance in the restoration or maintenance of organic function, and that salts, fats, sugars, starches and albuminoids must come into the account and receive that careful consideration necessary to the individualization imperatively demanded for satisfactory results.

It is an easy matter to generalize, and even to form classes, but it is oftentimes a most difficult matter to individualize cases for the purpose of treatment,

If we stop to consider the physiological fact that the human body is two-third water, and that this ratio must be maintained for healthy functional activity, it stands to reason that any variation from this standard must be at the expense of the solids of the body. Many cases of disordered digestion are due entirely to lack of sufficient water. Physiological experiment has demonstrated that mormal digestion in a healthy organism requires a pint of water in some form with each meal, and that any variation from this rule will be at the expense of the digestive powers. The majority of people are better off for water between meals when in health, and while there is no danger from taking water in large excess, at the same time it is hardly worth while to augment the bulk of the body to such an extent that it becomes burdensome. Of course we should not overlook the importance of intense thirst as a symptom of diabetes, and treat it accordingly.

In acute affections it is better to flush the intestinal canal with water, hot or cold, according to indications, and I know of no precautions in this respect which should be exercised. Water not only helps to clean the stomach of its contents, and aid in the digestion of food, but when taken up by the blood vessels, aids in normal nutrition and removes effete matter from the circulation by increasing the mobility of the fluids, thus relieving congestion of important internal organs.

The refreshing draught of fresh cool water should not be withheld from our parched fever patients under any circumstances, and they should be even urged to increase the quantity. The physician should see that it is offered, whether it is asked for or not, in all cases.

In cases of acute catarrh of the stomach, there is no agent which gives so prompt and durable relief as water, sipped as hot as it can be borne, and this will apply in a great number of affections, especially where the stomach is irritated in this way. Hot water quenches thirst better than cold, but we should bear in mind that it is an excitant.

It will not do attempt to substitute

alcoholic stimulants, tea, coffee, or even milk, for pure water, as they will serve in place of this important agent.

Our female patients may be induced to take more water it we convince them that rotundity of the body depends upon a suitable quantity of water, and that the blood vessels, when kept filled with a sufficiency of this fluid, will retard the wrinkling of the skin, which is the bane of every woman who cares for her personal appearance. We should, I think, impress upon our patients the fact that healthy function, not only as regards digestion, but in respect to all other functional activity, absolutely depends upon the water ingested.

There is no drug which will act more effectually—and certainly the action is more kindly—than water, in those acute affections where the liver is torpid, bowels inactive, tongue heavily coated, etc.; but the quantity ingested must be large, sometimes enormous, and in some cases as hot as it can be borne. Even when the liver is overactive, there is no remedy which so favorably clears out the bile and hastens convalescence as water, and there can be no unfavorable reaction, as there may be when drugs are used for this purpose.

I am confident that the kidneys, the great sluice-way of the body, may be saved from serious consequences, in many cases, after acute illness, especially in scarlatina and other exanthematous affections, by the free and methodical use of water internally.

We are often called upon to treat cases of nephritis in its various forms, in which the primary lesion was in the liver, which would have been prevented by the timely and proper exhibition of this simple remedy, and I know of no means which act so favorably, even in the advanced stages of the disease, washing out the life-destroying urea, and preventing or mitigating the terrible convulsions, which so often result in consequences so painful to witness.

Let us therefore bear in mind that the body needs cleansing internally as well as externally, and that there is no agent equal to *pure water* for this purpose.

The various mineral waters, of which we have a great number, should be studied for their specific individualities, and prescribed in accordance with this principle.

Of the artificial mineral waters, I know of none which are so satisfactory, reliable and trustworthy as those made by the well-known house of Carl H. Schultz. The water used in their manufacture is distilled, the formulæ are exact counterparts of the natural waters, they are fully charged with carbonic acid gas, and are in every respect just what they claim to be. I am justified, I think, in commending these waters to you, since I have used them to a large extent for more than twenty years.

The individualization of articles of food as respects the disease we are treating is important, and we should also carefully consider personal idiosyncrasy in our selection, as the great variety of foods at the present day, of more or less nutritive value, enable us to do. We find, however, that iron-bound rules respecting these matters will not answer practically, but that an enlightened intelligence must be used in all cases.

We ought always to keep in mind, in prescribing the diet for our patients, the modern physiology of digestion, as it appears in the light of recent investigation.

I often find that stomach indigestion is caused by insufficient mastication, the great majority imperfectly performing this act, so that the stomach is taxed beyond its power in the process of disintegration of those articles of food which should be hydrated at this point, thus throwing, perhaps, the work upon other organs which would be done here if the act of mastication were properly performed.

We ought also to bear in mind prescribing pepsin, that an acid medium is required for its activity, that it should never be combined with an alkali, and that hydrochloric acid should sometimes be added.

If we stop to recall the fact that starches should be digested by the salivary secretion, we will realize not only the importance of thorough cooking of articles containing starch, but also the necessity of allowing sufficient time in mastication for the mass to become properly intermixed with the saliva necessary to digestion.

Acute intestinal indigestion is often due to faulty mastication of foods containing starch, or which have not been sufficiently cooked to admit of their easy digestion. While we may be sufficiently conscious of the fact that all food must assume the soluble state before it can be taken up for assimilation, I am confident that we shall

find that the great majority of our patients do not accomplish this result.

The habit of rapid eating, hence faulty mastication, is a more important element in the cause of many diseases than is generally supposed. I have found that I get on much better in the treatment of patients since I realized the importance of mastication, and I try to convince them of this fact by explaining its physiology in a way which they can understand, as I find they are more likely to overcome the habit—not an easy thing to do—it they understand the reasons which underlie the subject.

Patients acutely ill will tolerate fats only when presented in the most delicate forms, such as cream-vichy, the yolk of egg with vichy, or vichy and milk. Sweet, fresh butter is an excellent form of fat when it is tolerated by the palate.

Cane and beet sugars must be inverted by the addition of a molecule of hydrogen before they can become as soluble as grape sugar and maltose, hence, they are more difficult of digestion than the lower forms of sugar, and should be used sparingly, if at all, as they are subject to acetous fermentation, which is irritating.

Grape sugar, milk sugar, and maltose are the ideal foods in this line, as they are easily soluble and readily absorbed.

Milk sugar, which is subject to lactic acid fermentation, is greatly to be preferred in the diet of the acutely ill, to cane sugar, which gives an acetous fermentation, for reasons which are obvious. For this reason I have suggested that milk sugar should be used in the preparation of kumyss, a point which some manufacturers have promptly utilized with great satisfaction.

Grape sugar, which is so important and useful in the treatment of the acutely ill, can now be obtained in a concentrated, unfermented form, without having been boiled, and absolutely free from any extraneous preservative whatever, from the California Grape Food Co., of Los Gatos, Cal., or from druggists generally. This grape juice is a great boon in the sick room, and is furnished in two varieties—red Zinfandel, not very sweet, and white Muscatel, having the well-known properties of this delicious grape.

It may be combined with various agents for use, but it is especially delicious with clysmic, vichy, or other mineral waters.

Grape juice, a compound of water, sugar (chemically dextrose), acids, salts, etc., exhibits all the proximate principles required for nourishment of the human body, resembling milk.

Grape sugar, the final physiological form of all starch and sugar, thus represents the simplest nutrient of its class for assimilative purposes, and we should take this fact into account when prescribing starchy foods, potentially sugar, and which must be converted to grape sugar before they are taken up, by taxing the digestive functions of Brunner's and Lieberkuhn glands for twelve to twenty-four hours or more.

Persons acutely ill oftentimes secrete very little saliva, so that starches are acted upon but slightly, if at all, and then grape sugar or glucose, in some form, is imperatively demanded. The grape, as an article of food in these cases, is excellent; but in the grape juice, as prepared, we have always at hand, in a most convenient form, all the qualities to be obtained from the grape itself, and at a reasonable price, which, at certain seasons of the year, is an item of importance to some.

I am in the habit of using syrup of glucose in place of cane sugar in many instances. I can see no harm in the artificial conversion of starch to glucose, by means of sulphuric acid and lime, so long as we are given a pure article. In commerce it may be obtained in its pure state as a syrup, or with dextrine, as desired, when it will appear in a sold state, and is furnished in cakes. The syrup is not as intensely sweet as cane sugar, and it requires more, of course, to be used for sweetening purposes, to satisfy the palate, but it is easier of digestion, accomplishes better results, and is less liable to produce indigestion. I add a teaspoonful or more, as desired, to a glass of milk, or any other vehicle, and, as a rule, patients are satisfied with it, and never any unpleasant results follow.

In acute affections the various fruits are refreshing, and give variety, according to individual idiosyncrasy, and are useful, not only for the water they contribute, but for the sugar, citrates, malates and tartrates of potassium which they contain in varying proportions, all useful under certain circumstances and conditions. Grapes certainly stand first in food value, not-

withstanding the fact that the banana* is the more nutritious, but the latter is much more difficult of digestion, and should be allowed with caution.

Figs and dates contain sixty per cent. sugar and six per cent. albuminoids, and are valuable as foods when indicated.

In the class of starchy foods we have a great variety to choose from, depending upon what we wish to accomplish, and upon the palate and digestive power of our patient. We have numerous prepared foods, of which Mellin's is a good example, for use where the digestive powers are impaired. Arrowroot makes a bland mucilaginous food, which, when combined with milk, answers a purpose, when the more pasty starches would not be tolerated.

Steamed rice with plenty of milk makes an excellent food combination, and a baked potato which is mealy, with plenty of salt to offset the potash which the potato contains, are both good forms of starch. Gruels made with the various cereals and combined with milk, or with diluted cream, as the case may require, are excellent foods for the acutely ill. Of course, it is necessary to individualize our cases for special purposes, but the most nourishing gruel for general use is made from the entire wheat.

Johnson's Educator Crackers, made with the entire wheat, either whole or powdered, according to circumstances, and eaten with milk or cream, make not only a nutritious dish, but are most agreeable to the palate of some.

Where more fat is desired, as the patient prefers, corn or oaten meal may be used for gruel, and the nutritive proportion can be augmented at pleasure by the addition of milk.

In the treatment of acute diseases we should not despair, but always bear in mind that death is a failure of nutrition, and that convalescence is more rapid where wasting is the least. Patients often drift into a critical condition simply from lack of proper feeding ; foods are given which are disliked or not tolerated, and we, as physicians, should find out the reasons for all these things, so that we may not have to look back upon a life lost through starvation!

The digestive powers are always impaired when one is ill, the ferments of the stomach may be powerless for digestion, and to pour in foods under these circumstances would be useless in the extreme.

The patient suffering from the shock of traumatism may not have that thirst which belong to the pyrexial state, so that drinks are not desired and solid foods not tolerated.

Under these circumstances, as a rule, a cup of beef juice or of peptones, repeated as required, will not only be tolerated, but will restore the lost equilibrium more hastily than can be done in any other way. It is much better to adopt this method than to wait for nature to do the work, as she is slow and extravagant, and often needs help in these reactionary methods necessary to the resumption of the ordinary diet.

In the treatment of our fever patients, no matter what the lesion, with the dry fauces, thirst and high temperature, the use of water becomes imperative, and if we can combine it with some nutritive constituents, the patient will be the gainer. We should bear in mind that milk is a food, and will not take the place of water in quenching thirst, It is well to dilute it with effervescing mineral waters, with or without the addition of grape juice. The starving of patients to keep down the fever is a thing of the past and should be utterly condemned.

A most refreshing and withal nutritious draught may be made with grape juice and effervescing mineral water, with the addition, according to indications, of either toast water, white of egg, yolk of egg, the entire egg, or of any of the extracts of beef, or of peptones, depending upon what we wish to accomplish.

I always include the grape juice as a base, when I can, for three reasons, viz.: 1. It is refreshing. 2. It answers the purpose of sweetening so much better than sugar; and 3. It is the normal nourishment of the body and is generally tolerated.

In some cases, other fruit juices, such as apple, tamarind, pine apple, fresh currants, orange or lemon, all of them of little nutritive value, may be used to bridge over or be added to the grape juice to suit the palate. Malt extracts are used by many for the maltose or grape sugar, soluble dextrine and some soluble albuminoids

* Nitrogenous matter, 4.820; sugar, etc., 19.657; fat, 0.632; cellulose, 0.2200; saline, 0.791; water, 73.960. N., 1–20; sugar, 1–5; water, ¾.

they contain, and their sweet taste may also be largely overcome by the addition of effervescing mineral water.

There is a difference of opinion in regard to the use of milk in enteric fever, not only on account of its deficiency of fuel food, but because the first step in its digestion is curdling, and a firm curd irritates. There are several ways in which the large curd may be avoided, and one of the best with unfermented milk is the addition of effervescing mineral water. Some use lime water, and others use baked flour. When the palate is not offended by an acid, kumyss may be used to great advantage, as here we find the curds small and that they will not become large in the process of digestion.

As I have said before, cane sugar is subject to acetous fermentation, and for that reason kumyss should be made with milk sugar as a ferment, as from this we obtain a lactic acid fermentation, which in many cases is greatly to be preferred.

The consensus of opinion is in favor of the free use of drinking water systematically in typhoid, either hot or cold, according to indications. As a rule, I prefer the carbonated, unless the patient objects. Many object to milk unless predigested, and all, I think, agree upon the use of kumyss, provided it is not disliked by the patient. Alcoholic stimulants are not indicated in all cases of typhoid, hence we should beware of prepared foods which contain whiskey. Glycerine with hydrogen dioxide is an excellent remedy, for many reasons which will be obvious to any one who stops to reason out the *modus operandi*.

In our cases of indigestion, acute or chronic, we have found papoid one of the best digestive ferments, and especially as it acts equally well in an acid or an alkaline medium. Papoid dissolves the abnormal mucous secretion, prevents fermentation, stimulates the gastric mucous membrane to normal secretion, beside being one of our most powerful solvents of all articles taken as food and certainly holds a large place in our armamentarium.

Milk sugar is claimed by some to admit of no direct alcoholic fermentation, but by a lengthy action of yeast, this may be accomplished.

When kumyss proves to be too heavy a food, and an acid is required, buttermilk which has been allowed to stand for a time in a warm place, and then cooled to the taste, will answer the purpose.

Buttermilk is as light a food as we can well provide, as it contains no fat, and but a small quantity of proteids, in the form of well-broken curds. The entire milk, or cream, or skimmed milk, should be selected according to circumstances, with or without effervescing mineral water.

In order that we may know just what is being given as food, the nurse's record should be carefully kept, so that it will always tell exactly what is being done; then, with a full knowledge of food values, and with the air to adapt food to suit conditions, we can have increased hope for recovery in all our cases.

We often find patients who assert that they cannot tolerate milk of any kind in any quantity, as a diet, and occasionally we have to admit that these claims are well founded. I think, however, that the majority can overcome this idiosyncrasy by judicious and methodical effort. Patients who dislike milk, or are disinclined to take it, should be carefully dealt with, and as a rule the prejudice (for many times that is all it amounts to), or the dislike, can be neutralized. The use of milk in these cases should be commenced gradually, and in small quantities, increasing slowly and methodically each day until the maximum is reached.

I have found the addition of grape-juice, glucose or maltine to milk, excellent aids with those who like sweets, in establishing the milk diet.

Milk will sometimes form solid curds in the stomach when used in its natural state, and may require the partial conversion of its casein to albuminoids, which will not coagulate.

This may be accomplished by a process of shaking in a closed vessel for a short time, by the addition of carbonated water, or by the use of peptonizing powders, which are furnished by the well-known house of Fairchild Bros. & Foster.

The process is well known to you all, but should the details have escaped the memory, directions will be found with the powders as furnished, and the degree of digestion may be limited by heat and cold to suit the particular case. Albumoses thus produced, non-coagulable by heat or by dilute acids, answer an excellent purpose in many

cases, but we should remember that when digestion it carried too far, a peptone is produced, with its bitter taste.

The subject of feeding with sterilized milk has not fulfilled in practice expectations of its sanguine advocates. Sterilized milk is said to be less easily digested than untreated milk, and that continued use is liable to be followed by scurvy, and that it is not prophylactic of septic diarrhœa. The reasons are stated to be that the milk is acid, and contains various products of decomposition which are poisonous and irritating to the intestinal mucous membrane.

It is positively stated upon good authority that boiled milk curdles within the stomach in the same way as if it were unboiled.

Sterilized miik deteriorates with time, and should not be used if more than a week old, kept in a cool place.

The albumen of egg forms an excellent food in various combinations in many acute affections. I have been in the habit of using it mixed with some mucilaginous medium, in cases of acute enteritis, with excellent results. Patients are able to take the whites of anywhere up to a dozen and a half, in twenty-four hours. All sorts of combinations may be made with it, depending upon conditions and circumstances. I often use it with grape juice and some effervescing water, to the great satisfaction of patients. It may be added to the cold beef extracts to great advantage, and in this way we obtain a most nutritious, as well as stimulating food, which is agareeable to many palates

Hauser (*Berl. Klin. Woch.*, Aug., 14. 1893.) proposes for infants a food consisting of cow's milk corrected by addition of cream, milk sugar and egg albumen, heated above 130°, with the result of checking vomiting and diarrhœa, and we should certainly keep the suggestion of adding egg albumen in mind, as our resources are sometimes taxed to the utmost to find a food which will agree with some infants.

I have pushed the egg to the extent of being able to detect it in the urine, a result which sometimes obtains. The egg albumen is much easier digested when mixed with some carbonated water. We should study differentially the use of the entire egg, the white and the yolk individually, and a wider range of application of this valuable food stuff will commend itself to us.

Nitrogenous food in some form or combination, is absolutely necessary to the continuance of animal life, beyond a short limit. The proteids, defined by Kirkes to consist of albumen, casein, gluten, and their allies, and gelatin, and which contain carbon, hydrogen, oxygen ,and nitrogen, and some of them sulphur and phosphorus, form, according to Foster, the principal solids of the muscular, nervous and glandular tissues, of the serum of blood, of serous fluids, and of lymph, and are frequently spoken of as albuminoids.

Proteids are readily converted at the temperature of the body into peptones by the action of the gastric juice in an acid, or of pancreatic juice in an alkaline medium.

Physiologically speaking, the whole animal body is modified protoplasm, the proteids forming the chief mass, fats and carbohydrates however, never being wholly absent. It is a self-evident fact, therefore, that our efforts in restoring health must be directed in accordance with sound physiological principles, and the pabulum necessary to restore a lost equilibrium must combine the elements necessary to nutrition in a normal manner. This, however, cannot always be done in the sick, by the exhibition of foods in what is known as a mixed diet. We are compelled sometimes to limit our food supply to any one of the class of elements which go to make up an ideal diet. We have heard much of late of albumose or albumen peptone, as a most desirable article of nutrition in certain conditions. Albumose is a term applied to partially digested albumen, just before the full change to peptone occurs, and it is considered a veritable tissue builder. Albumoses are odorless, tasteless, and are consequently devoid of some of the odjectionable features of the peptones. The most perfect preparation of the albumoses yet produced is furnished us from Germany, under the name somatose.

Somatose is a yellowish, fine, granular powder, readily soluble, perfectly odorless and practically tasteless, containing the nutritive qualities of meat, minus the glutinous material, fat, creatin, xanthin, etc. The usual dose of somatose is a teaspoonful or a dessert spoonful dissolved in a cup of milk, soup, grape juice, with or

without the addition of effervescing water. It has been found that this agent diminishes nitrogenous waste, replaces the albumen of the organism, and one part is equal to six parts of beef devoid of fat.

It is claimed to be indicated in all acute diseases where a food rich in albumen and readily assimilated is required, and I have found it of especial service in cases where the peptones were declined on account of their odor and taste.

We may imitate, artificially, the action of the stomach in converting meat albuminoids into soluble substances, for use in such patients as are unable to complete the act themselves, and thus add to our armamentarium for their treatment. I have used the beef peptones made by Rudisch for years, in enormous quantities, and I am confident I have saved many a life with them.

There are cases where the increase of urea is to be avoided, in which we should be cautious in the administration of beef peptones, the same as we would in allowing the meat to be taken in the undigested state. We should have positive indications for and against the use of meat, as we would any other agent. The healthy human stomach has no trouble in digesting beef that has been properly masticated, and when meat is indicated in the acutely ill, there can be no objection to a peptone made from the entire meat by means of artificial heat carried to a high temperature, which so entirely changes the fibrin as to make it correspond in general composition with other proteids, and, according to Schonbein, it becomes a bearer of ozone.

Beef peptones of this class contain some sixty per cent of nutritive value, and I cannot speak too highly of their employment in a great variety of acute affections when this form of nitrogenous food may be called for. I will not take the space to enumerate the great variety of affections in which they are useful, because it is well known clinically to most of us that beef peptones fill a large place in the nourishment of our patients suffering acute affections.

A characteristic feature of peptones is their extreme diffusibility, a property which they alone, of all the proteids possess, since all other forms of proteids pass through membranes with the greatest difficulty, if at all. (Foster.) In order that the peptone may not escape by the kidneys as easily as it gets into the portal vein, it is dehydrated and once more becomes a proteid.

The further study of the elaboration of the albuminoids, while of the greatest practical interest, would carry us too far for the limits of the present paper, notwithstanding the fact that many points have an important bearing upon the dietary and other treatment of acute cases.

It must suffice for us to say in this connection that the liver and kidneys require plenty of water, to successfully carry off the excess of soluble urea which is the result of taking albuminoids in excess of body wants.

The relative value of the various preparations should be kept constantly in mind when such articles are being considered as foods. While ordinary home-made beef tea, and all the extracts are next to nothing as nutrients, they certainly have a place as stimulants, and as flavorings for other more nourishing foods, not so pleasant to the palate.

There are in the market preparations of blood and whiskey, under various trade marks, which have a large sale, I presume, and which are highly praised by some, who, I am afraid, do not always take into account their composition, and while these have a place in our armamentarium, we should not lose sight of the fact that they contain an alcholic stimulant and are very offensive to the special senses of smell and taste, and their food value is not very great.

The juice of meat which has been heated sufficiently to swell and dissolve the envelope of the muscular tissue, can be easily expressed by an ordinary lemon squeezer, is agreeable to the taste, possesses a food value of about seven per cent., and answers an excellent purpose to help bridge over, or it may be used as a vehicle for peptones, (when these are offensive to the taste) or for uncooked eggs, when it is desired to increase the quantity of food, and beef juice is agreeable to the palate.

John Wyeth & Brothers made a delicious beef juice, agreeable to the most fastidious, which can be found at any druggist's, and for this reason is most readily obtained, having a food value of three per cent., which is a great convenience.

When heated in the test-tube Wyeth's

beef-juice becomes solid, thus showing the percentage of soluble coagulable albumen. It also contains the hæmoglobin of the meat unaltered.

Of course these meat juices should not be heated above 110° F., if we care to retain the "juice" properties, although when coagulated it will make an excellent beef tea. This beef juice answers the purpose of a vehicle for any of the more nutritious food stuffs, and it may be diluted with any of the carbonated waters. As a stimulant, Wyeth's has no superior, embodying in a concentrated form all the albuminoids of beef. It is perfectly stable in every climate, contains no alcohol or other preservative, excepting common salt.

I am in the habit of prescribing this stimulant in preference to alcohol under many circumstances, thus saving the depressing reaction.

It will be found of service in acute gastritis, when no other agent will be tolerated by the stomach. It can readily be demonstrated by heating a one-third solution in a test tube that albuminoids are present as stated.

Combined with grape juice we can easily administer enemata in typhoid and other grave conditions, when loathing for good food would make the case almost hopeless otherwise, and thus supporting our patients over a trying moment, we hope for much more than could be reasonably expected under other circumstances, and death by exhaustion from neglected nutrition will be avoided.

A simple and inexpensive extract of beef which can be made at home has been recently suggested by Dr. Jacob Price, of Westchester, Pa.

℞ Hydrochloric acid officinal.....f 3 i
Essence of pepsin (Fairchild's).....f 3 ii

Of this mixture three teaspoonfuls are to be added to one pound of finely minced lean beef, and placed in a quart jar in a cool place which is to be nearly filled with *cold* water, tightly covered and well shaken every half hour for two hours, when it will be ready for use. It may be salted and flavored at pleasure. When the question of expense is to be considered, this will be found to answer the purpose excellently.

The details must be carefully carried out in preparation.

The last candidate for our service in the way of a predigested food, from our friends, the Fairchild Brothers, has been named "Panopepton" and consists of bread and beef, with sherry wine as a preservative. We are assured by this reliable house that only prime beef and the best wheat flour are used, and that both are thoroughly cooked, properly digested, concentrated in vacuo, and contain all the elements requisite for the nutrition of the body.

Where a stimulating and nutritious reconstructive is required at the same time, Panopepton will be found much more useful and agreeable than the blood and whiskey abominations.

When one has been chilled, there is no agent which so promptly and effectually warms up the body as a cup ot hot sarcopeptone, and it is far better than any alcoholic stimulant.

Pneumonia patients will do much better, when they are able to tolerate hot sarcopeptone every two hours from the beginning. The course will be more rapid, the crisis will be passed with safety, and rapid convalescence result.

We may emphasize this mode of treatment in our diphtheria patients.

The entire absence of proteids is a marked feature of bile, and the bile has no digestive action upon proteids whatever. Foster says that "we may fairly assume that the secretion of even such a complex fluid as the bile, is in the main, the result of the direct metabolic activity of the protoplasm of the hepatic cells."

It is enough for our present consideration that tissue waste and albuminoid excess are burnt up (mainly in the liver), and oxidized in a descending series of retrograde albuminoid metamorphosis.

There is certainly an art in preparing and serving articles of food, and it may be made of great utility, especially with the acutely ill. Not that it should be used to seduce the patient to take food which will not be tolerated by the stomach, but rather that the sight of it, because of its dainty neatness and surroundings, will stimulate the special senses in such a way to excite the appetite to as nearly the normal point as possible. To many, the æsthetic element, which adds attractiveness, will increase the digestibility of the article ingested. Upon the cook and the nurse the physician is dependent for much

that will help in the convalescence of the patient.

Acute disease is always accompanied by fever, consequently the physician should carefully weigh the effects of the different classes of foods in kind, in quality and in quantity, in order to successfully overcome the loss of body weight, and to offset the increase of urea and the excessive excretion of carbonic acid and water, in order to avoid the danger limit. I cannot urge too highly the use of carbonated waters in these cases; and they are to be used freely, all that can be borne, as they will be most agreeable to the patient in quenching thirst, they are refreshing, reduce abnormal temperature, and digestion and assimilation is better performed in their presence.

It is worse than useless to give a patient food he cannot digest in any form or quantity, and we cannot be too careful in this regard during convalesence.

It is just as important to watch the excreta as it is to know what goes into the stomach as food.

There is no point in typhoid fever which is of more importance than the quality and preparation of the food, carelessness or over zeal in this regard resulting in fatal results.

Diphtheria is one of the acute affections in which the pushing of nourishment to the utmost demands the constant attention of the physician himself, for it is not safe to trust so important a matter to any attendant, and the patient who cannot be induced to take sufficient food is going to die!

The buccal cavity can be kept clean and in condition to tolerate food, with a solution of Sanitas fluid; and this is important, because patients will refuse food oftentimes because of the sensitive or foul condition of the mouth.

The palate and individual idiosyncrasy are important factors in feeding the sick, and in choosing variety the palate as well as the question of nourishment should engage our attention.

It has been well said by another that "when life seems passing away under their eyes, the friends will often shrink from tormenting, as it seems to them, the sick man with food. Let them not despair; many a one has recovered after the doctor has taken his leave with a sad shake of the head, and without making a fresh appointment. And let them also be stimulated by the fact—namely, that the pains of death are aggravated, if not mainly caused, by the failure of the nutrition. Even when apparently insensible, the dying suffer much increased distress from want of food, though they cannot express their suffering."—*N. Y. Med. Times.*

SOCIETY REPORTS.

CINCINNATI OBSTETRICAL SOCIETY.

[OFFICIAL REPORT.]

June 28, 1894.

CLINICAL REPORT OF FOUR CASES OF APPENDICITIS; OPERATION AND RECOVERY.

DR. RUFUS B. HALL: I present this short report to-night as illustrating the different conditions for which we are called upon to make operations for the relief of this disease.

CASE I.—R. D. H., a physician, living in North Liberty, O., consulted me February 9, 1892. At that time he was unable to walk from the effects of his illness, having been confined to his bed for several weeks. His weight, which was usually 200 pounds, had fallen to 140 pounds. He was just recovering from his fifth attack of appendicitis within eight months, each confining him to his bed for from a few days to two or three weeks. He had the usual symptoms of appendicitis; a well-marked induration in the region of the appendix, with tenderness and pain upon pressure, which had never entirely disap-

peared after the first attack, in June, 1891. He had been able to practice medicine between the attacks, but always with some discomfort in that region. During these attacks he suffered greatly from irritability of the stomach and nausea. This was so marked he was unable to take any except liquid food, and that in small quantities. For three weeks his stomach was unable to retain more than an ounce of the blandest nourishment at a time. His food was practically limited to milk and lime water. During his last attack he suffered greatly, requiring morphine for the relief of the pain. He was brought to the city and entered my private hospital at that time, being unable to straighten his right leg on account of the pain it caused in his abdomen. His temperature was normal, his pulse 112.

After a thorough examination, operation was advised and made February 12. Upon opening the abdomen the adhesions were found to be extensive and very firm, and it was with considerable difficulty the appendix was found. There was no pus present, but the appendix contained five foreign bodies, about the size and appearance of grape seeds. After careful examination these were determined to be concretions. He made a prompt and complete recovery, returning home March 18. Within three months he weighed 200 pounds. He has no return of his former trouble, and is now actively engaged in the practice of medicine in a country district.

CASE II.—Miss E. S., Columbus, O. Occupation, stenographer; aged twenty-six. She had always enjoyed good health previous to the present illness, which came on in the night of December 24, 1893. On the morning of that day she left Columbus to travel to Cleveland and spend the Christmas holidays with a sister in that place. She attributed her attack to the ride on the cars, but as to the truth of that I have serious doubt. Within a few hours after the pain commenced it became so severe that a physician was called; he at once diagnosed appendicitis. She was very ill for three days, but on the fourth day the symptoms abated, and he advised her removal home. This was done, and for three or four days she improved, but on January 1 her temperature again rose to 103° and on the next day to 104°. On the night of January 4 I saw the patient at her home. Her pulse was 130, temperature varying from 102° to 104°, and a well-marked induration in the right iliac fossa, with occasional vomiting.

Immediate operation was advised, assented to, and made the following morning.

Upon opening the abdomen, extensive adhesions were found adhering to the anterior abdominal wall. These were carefully separated towards the brim of the pelvis until we opened into a cavity containing several ounces of chocolate-colored bad-smelling pus. As is my custom in cases where suppuration is great, no extensive search was made for the appendix. The parts were carefully cleansed and drained. Upon the fourth or fifth day the pus contained a slight quantity of feces, and this objectional material was present for the following ten days. At the end of four weeks there was no indication of intestinal leakage, but it was five weeks later before the wound was entirely healed. She made a complete recovery, and is now back in the office in perfect health.

CASE III.—E. M., aged twenty-six, farm hand, Mason, O. I saw him in consultation, April 12, 1894, when the following history was elicited. The patient was taken suddenly ill about ten days before my visit with pain in the right side of the abdomen, which soon diffused itself over the entire abdomen. He had a temperature ranging from 101° to 104° from the first. The first few days of his illness the physicians gave him physic and thoroughly emptied the intestinal tract; after that time he was given milk and broths, but no physic. He had occasional doses of morphine, but gradually grew worse. Upon examination I found that the colon was largely distended with feces, which consisted of scybala following the use of milk diet, and the intestines were greatly distended with gas. In the right side of the abdomen the tenderness was well marked. He had been given chills and sweats for two or three days, with every indication of suppuration. An operation was advised as soon as the bowels could be emptied of their contents, which in this condition is not easily to accomplish. After repeated doses of salines and many enemas the bowels were thoroughly emptied, and in response to a telegram I went to Mason on

the morning of April 14 and made the operation.

In separating the firm adhesions to the anterior abdominal wall, we opened up the abscess cavity, holding several ounces of dark-brown, offensive pus, having a distinctly feculent odor. This was thoroughly cleansed and drained. At the upper end of the incision we had opened freely into the peritoneal cavity. This was closed off with gauze packing and the wound dressed, practically as an open wound. The patient had a fecal fistula for about three weeks; at the end of six weeks the wound was perfectly closed. He is now doing his usual work as a farm hand, and enjoys good health.

CASE IV.—W. W. P., aged forty-one, physician, Fredericktown, Ohio. He had his first attack of appendicitis about six years ago, at which time he was confined to the bed for a few days, the soreness remaining a week or two. After this time he had no tenderness or pain in this region until September, 1893, when he had another well-marked attack of appendicitis, confining him to bed for several days, the soreness and induration not disappearing for about three weeks. After this he resumed work until December, when he had a third attack of about the same duration. In January, 1894, he had a fourth attack about like the others, but in March he had a very severe one, confining him to bed for a week or more, the pain and induration not disappearing for about six weeks. On May 10 he had the sixth and last attack. He was unable to work after that time. He consulted me on June 5, at which time he had a well-marked induration the size of a small orange in the region of the appendix, which was exceedingly sensitive to pressure. He was able to walk, but not with any degree of comfort, and had come to the city to have the operation made. The temperature was above normal after the last attack. For three months he had practically lived on liquid food. His weight had decreased from 160 to 140 pounds.

The operation was made at my private hospital, June 7. Upon opening the abdomen and separating the adhesions, which were firm, we opened into a pus cavity holding about half an ounce of pus. The appendix was crescent-shaped, and in the hollow of this crescent, between the coils of the intestines, was the pus cavity. The appendix was about the size of the little finger, except for about one-third of an inch just where it joins the colon. This was about a quarter of an inch thick, and appeared cartilaginous. It was ligated close to the colon and removed. The distended portion of the appendix contained a small quantity of pus—perhaps a half-drachm. There were no perforations of the appendix that could be determined. This patient has made an easy and prompt recovery, without an unfavorable symptom.

This patient had consulted many physicians and received as many opinions, which, I am sorry to say, differed very widely. Even at the last of his illness, the men who do not practice surgery advised delay, but the men who do practice surgery advised operation. This should not be. I think it is time for the profession to get together in their opinion in cases of appendicitis requiring operation. There need be no doubt about the advisability of operation in recurrent attacks of appendicitis, especially where they recur with frequency and severity, as they did in the first and last case. Again, there need be no doubt, even if it is the first attack, as in the second and third cases, where the temperature and other symptoms plainly indicate the presence of pus.

DISCUSSION.

DR. CHARLES BONIFIELD: I had a case of appendicitis last winter that I had intended to report systematically at some time, but the last remark of Dr. Hall causes me to report it now. The patient was a boy ten years old, whom I was called to see Christmas morning. He went from bad to worse, and in twelve hours had a general peritonitis; pulse about 130, and could not retain nourishment or food of any sort. Dr. Forchheimer was called in consultation. We discussed the advisability of operation, but neither of us were very much in favor of it; I, in particular, was not. At any rate, it was postponed until the next day, when we got his bowels to move. He then began to retain nourishment, and in about four days he was convalescent, and in a week I did not think it necessary to see him for a few days. When I came back I found a temperature of 101°, and this continued about a week. I made an examination for pus, but I was unable to feel anything through the abdomen or the rectum, and with nothing

but the high temperature to indicate it I did not feel justified to make an operation. There was some pain over the liver, but not very marked. About twelve days later his temperature ran up suddenly to 104°; I was telephoned for, and just as I got to the house they told me he had a very severe spell of coughing. I went up to his room, and found he had been discharging pus through the lungs. His temperature then fell, and in a week it was normal. In the face of the acute general peritonitis I do not think operation would have been justifiable. After the temperature continued high I would not have explored the liver, and think probably the abscess was above the liver. The liver was not specially enlarged at any time. Opening the abdominal cavity would simply have made it worse.

DR. HALL: What was the diagnosis of the first attack?

DR. BONIFIELD: Appendicitis.

Q. Could you outline a tumor?

A. The colon seemed to be filled with feces; you could map out an area of dulness.

Q. Your diagnosis was correct, I presume; what was the action of the abscess?

A. Acute general peritonitis.

Q. Septic in character?

A. I do not think it could be called a metastatic abscess.

DR. C. D. PALMER: His marked improvement was after the discharge of a quantity of matter?

DR. BONIFIELD: Yes, sir.

DR. A. W. JOHNSTONE: This is very interesting, and the one point I am glad to hear brought out and special stress laid on is not to operate while the intestinal canal is stretched to its full extent. I do not think any man is justified in making a laparotomy under those circumstances. One case of appendicitis, which some of the gentlemen present saw with me, turned out to be just a common colic caused by the fellow eating apples. No appendix was found, but the man got perfectly strong and well. I believe sometimes the appendix may slough out through the bowel and a chronic peritonitis left, which may be cured by an exploratory incision. In this case no appendix could be found. The colon was laid open from the ileo-cecal valve to the head; there was a blotch of cicatrices everywhere, and we had to separate a number of them. After I had gotten back it seemed as if we were going into the normal parts, and I stopped. There seemed to be some accretion, but this I found to be only the contents of the bowel. I took the drainage-tube out about the second or third day, and the serum poured for about a week. He came back in a few weeks and I did not know him; he said he had earned the money in a brick-yard to pay for the operation.

My first operations in this line were upon negroes down South. They were close together, and are living to-day.

I have seen men who no doubt had one attack of appendicitis; everything was asked to make the diagnosis perfect, and they are well to-day; so I am not prepared to go to the same extent the New York Academy does. But the second attack always calls for operation. It is then time for us to go to work. If the first attack is mild, I think it is safe enough without operation. I had an experience with a little girl, aged thirteen, who had menstruated her second time and completed it one Wednesday. The following Sunday she had jumped the rope, and had some pain, but did not call the doctor until the following Wednesday. I saw her about 1 o'clock and ordered her to the hospital. I found she was in shock, the temperature below normal (about 98°), and I ordered a cathartic. The next morning the temperature had risen a little, and I saw the child was going to die unless something was done. I made the effort, simply going through the abdominal wall, and I found a lot of feces, enteroliths, etc., and she died that afternoon. In these cases the gas must be removed before the patient is safe, and the whole question simply resolves itself into whether it is easier to do this before than afterward. I do not think it is safe to cut into the abdomen in any case before this is done, except in cases of stab wound. In the first laparotomy of my old assistant, down at Danville, the case was caused by the blow of an ax handle. In that case the bowels continued distended, and it was perfectly apparent that unless something was done the child would die. I assisted him in opening the abdomen, and we found nothing but a dry peritonitis and an enormously distended canal. When the intestines were gotten out we could not return them without opening them, and so we made an eighth of an inch

opening in the intestinal canal and let out all the gas and feces we could possibly get out that way. He made a beautiful recovery, which I think was due to the drainage. The introduction to the drainage-tube started the serum to flowing, and it just poured for several days. In proportion to the pouring of serum was the improvement of the child. Of course the difficulties of the peritonitis we know. We often find these cases with adhesions.

I do not think the appendix is put there for nothing, but that it is after all only a hollow lymphatic gland; it is simply a continuous Peyer's patch, and the volume of the serum I think is increased. It is there, and I do not think we have a right to take it out every time we find it. In the last year I have had the appendix in my hand three times, and several times have had to ligate the adhesions and take them away. Now, when the appendix is perfectly normal, except from inflammatory bands which have come from the tubes and ovaries, I cannot understand why we should consider it necessary to remove it. I saw a normal appendix exhibited in the New York Academy, taken out just because the gentleman had his hand on it. I do not think we should hunt for the appendix in cases of abscess. In the case I had within the last week or ten days, a large abscess of the ovary had been discharging through the alimentary canal. It had continued a year or two. I got the ovary out, but could not get the tube out without wounding the intestines. I expected to curette the case afterward. I found the sinus had gone down to the broad ligament, and then out into the intestine. It has made an uninterrupted recovery. I think when we find the thing we are after to save the life of a patient we ought to quit, and that is a law we ought to follow more closely. My old professor used to say: "Boys, don't muss and muddle; don't go too far, because every time you touch an intestine or break an adhesion you add that much to the risk, and the thing to do is to do as easily and smoothly as possible the one thing you go after, and leave the rest alone."

DR. W. H. WENNING: I have not had any personal experience, and come just to learn; but one remark of the last speaker brought a query to my mind—whether in some cases with accretion, instead of removing the appendix, would it not be possible by pressure to force the substance into the main gut, and leave the appendix alone? I have not my mind definitely made up as to the proper treatment of these cases. Certainly the medical aspect has something in its favor. I am sure many cases are cured by medical treatment and before we determine what is the proper line of treatment we ought to listen to the medical side. I would like to hear Dr. Cleveland's views on this question.

DR. J. L. CLEVELAND: My opinion, based on my own limited observation, is that the majority of the cases of appendicitis get well. I think very likely every practitioner has a number of cases of appendicitis, and it is only now and then that we find it necessary to call in assistance to operate for us. In fact, in twenty-five years I have never had a case that was operated upon. In one case it would have been very fortunate had I called in a surgeon, but in that case I did not fully realize what I had to deal with until it was too late. I can recall some three or four cases that have entirely recovered without operation. The statement has been made by experienced men, and I do not doubt it, that when the appendicitis appears more than once it is probably well to operate. While I am not in a position to contradict that, still I am of the opinion that frequently even these cases get well without operation. One case especially, which I have in mind, a man probably thirty-five years of age, has had some three or four distinct attacks of appendicitis. At one time I advised an operation, but after a series of weeks he recovered. He simply had an acute attack of pain, a localized peritonitis around the region of the appendix, and it lasted three or four weeks. It was not like the fever we have when pus is present, and if there was any pus I did not discover it. He is now perfectly well and is doing his work. I had another case, which occurred in a woman, showing that these cases may be cured sometimes by simple puncture. She had one or two attacks of appendicitis, and I wanted her to be operated upon—insisted upon it, in fact—because I thought otherwise she would die. After two or three weeks, the peritonitis not becoming general, I could feel a fluctuating tumor, and I was so well

satisfied that I had felt justfied in sticking a knife into it without saying anything to her about it. Afterward I increased the opening and washed it out. I mention this case to illustrate an experience which I expect others have had, namely, that the appendicitis has softened in some cases so they have thought best to stick a knife into it. I have had another case when resulted the same way. Our judgment in these operations is to a large extent influenced by what we see. The general practitioner only sees the cases which come under his own observation, while the specialist sees not only his own but also the cases coming under the care of others. I feel satisfied, from want I read regarding the operations in the East, that they are certainly carrying things too far and operating too freely; notwithstanding these patients usually recover, I do not think it is an easy operation by any means. The point I would make is that the majority of cases of appendicitis get well under the medical treatment and only the serious or worst cases come under the observation of the laparotomists.

Dr. Johnstone: I remember, while practicing in Kentucky, I went down in the mountains, in that ignorant Egyptian land, and I found a patient who was not only pregnant but had a large lump in the groin. They would not let me touch it, and I returned home. The doctor wrote me in three or four months the result. She got well, but with the thigh drawn up. She would not let him touch it, and it dissected away up the side and down the thigh, and it discharged about two gallons of pus. At the time of her confinement the leg was drawn up in such a position that it was difficult to get the child out. This illustrates how nature will sometimes bring these patients through, but with what deformity! When cases have the second and third attacks of appendicitis, the percentage of recovery is very greatly reduced. But when we find it is safer to operate than to let the patient alone, I think a man is a simpleton not to go ahead and operate.

Dr. Hall (closing): Certainly no man would take off an appendix which was healthy, unless he resided in New York. I have frequently pulled them off from adherent pus-tubes or suppurating ovaries, and pushed them out of the road. I simply pulled them off as I would an adhesiou with any other organ—as a coil of the intestine for instance—and let it be. I removed one appendix, however, that was fairly healthy, except it was adherent to a large fibroid tumor. I have reported this before. I did not recognize it as the appendix, but mistook it for a vessel. I put it in a clamp, because the blood from it squirted over my head. The patient recovered. That is the only time I have ever been guilty of removing a healthy appendix. I think the suggestion by one of the speakers, of pushing the accretions back into the gut, is a very problematic one. In fact, in all these cases that we are called upon to operate there is an inflammation rapidly going on, and the narrowest calibre is to be found where the appendix joins the gut. In the first case reported the physician had several foreign bodies in the appendix. There was a sort of cartilaginous portion near the intestine, through which there could be found no hole whatever, and I think it would have been perfectly safe to have cut it off without any ligature. I will grant, if such a thing could be done, it would be perfectly safe to do so, but I think we would very rarely find a suitable case. I have never considered the question to any great extent, but it has never occurred to me that that would be a good way to treat these cases.

In reference to the medical treatment, I think we all agree with Dr. Cleveland, but I think we should get together, and medical men should refer the cases for operation before they reach the autopsy-table. After they have had a second or third attack, especially if those attacks occur at short intervals and are severe, there should be no question about operation. I believe they should all be operated upon. I have the record of a case, however, which has recovered now five or six years after the ninth attack in two or three years. The patient learned to lead an invalid life, because exercise would bring on the disease, and nature cured the case without operation. I have the complete records of one case that had seven or eight exceedingly mild attacks and then had an exceedingly severe attack and went to the graveyard. When I saw her it was impossible to count the pulse, and she died in an hour or two afterward. I have not reported these cases for a purpose of drawing a line between those cases which should be operated upon, for I consider that each

case is a law unto itself, and the party having the patient in charge must be the judge.

DR. CLEVELAND: How young a child can have appendicitis?

DR. HALL: I have operated upon one nineteen months old.

ELECTRICITY FOR STERILITY.

DR. C. D. PALMER: It will be remembered that several months since I made mention of a case of sterility, which I considered cured by means of the galvanic current. It was a form of sterility which is perhaps one of the most, if not the most, common form. It is a congenital condition, arising in the second period of development of the uterus, in which the cervix becomes elongated, the os externum very small—pin-holed, and the whole uterus is more or less imperfectly developed—the infantile uterus.

The galvanic current was used as follows: The positive pole externally over the abdomen, and the negative pole placed intra-uterine, so that the cervical canal might be dilated, and the whole uterus enlarged. After repeated applications, and occasional intermissions of any treatment, the patient became pregnant. When I had reported the case to this society she was in the seventh month of utero-gestation. She underwent parturition a few weeks since. Toward the end of the normal term of gestation I visited her once a week, to see what progress was being made in the natural process of obliteration of the cervix, occuring usually within the last two weeks. Now, noticing that the os externum was still small and contracted, although she had approached to the time of parturition, according to the Naegeli rule, I commenced an artificial dilatation with my metallic forceps, using first the smaller and then the larger size. This procedure induced feeble pains, and in a few days genuine labor set in. But the first stage was the most prolonged and perplexing one I have ever witnessed, extending over a period of three days before a sufficient amount of dilatation had been accomplished to introduce my hand within the uterine cavity. By this time the patient was very much tired out, had a frequent pulse and slight elevation of temperature. The examination revealed a right sacro-anterior position of a breech presentation, a complete extension of the fetal legs on the flexed thighs, and a contracted pelvis of the mother in its antero-posterior diameter of the brim. This pelvic contraction did, and could have no influence in delaying the progress of the first stage of labor. The same was due only to the imperfectly acting uterus. Needing assistance, I sent for Dr. Edward Mitchell, and after a hot-water antiseptic vaginal injection, and the administration of chloroform to complete anesthesia, I commenced podalic version. The high position of the fetal feet within the uterus, and the somewhat tetanic condition of the uterine walls, delayed me in bringing down both feet and the delivery of the whole body of the fetus, save the head. Anticipating that I might have to contend with a retained head because of the maternal pelvic contraction, after a reasonable traction on the fetal neck, favoring utmost head flexion, I applied my obstetric forceps, and made a prolonged vigorous traction. Then I requested Dr. Mitchell to continue this forcep traction, while with the two fingers of the right hand I pushed back on the occiput, and with the same fingers of the left hand hooked in its mouth I pulled down the lower jaw. These combined efforts of both were successful in effecting delivery of an asphyxiated child. Dr. Mitchell then devoted his entire attention to the resuscitation of the child, and he was successful after prolonged efforts. Of course, the delay in the delivery of the child's head and pressure on the umbilical cord explained this asphyxia.

Prior to the commencement of labor pains, and before artificial dilatation of the cervical canal, I measured the exterior of the pelvis in three of its diameters, to detect, if possible, any malformation. External pelvimetry revealed none. This procedure only proves how unreliable external pelvimetry is in confirming a pelvic contraction. Many pelvic deformities, if slight, especially the juxto-minor can be detected only in parturition itself.

After the delivery of the placenta, as is my invariable custom, I proceeded to irrigate the vagina with hot water, antiseptepticized with bichloride (1:4000), and then observed an unusual post-partum flow, although the uterus itself was in normal position and size. The blood

seemed to proceed from the vagina, and it could be seen coming from a rupture of the veins of the "bulb of the vestibule." The latter was checked by a ligature passed beneath the bleeding vessels, and suspecting a rent of the cervix as the cause of the former, I exposed the cervix with a large Sims' speculum, and passed three silk sutures to close this rent. The patient made a smooth and uninterrupted recovery, notwithstanding she was nearly pulseless after the sutures were placed.

Among other questions which may arise in discussing this case, I wish to state that it has been my habit to stitch a lacerated cervix immediately after parturition, if the tear is noticed as much as to within the vaginal vault, and always, if the torn cervix walls are the source of the post-partum hemorrhage. There is but little doubt that some of the few cases of post-partum hemorrhage, occurring at the present time, and ending fatally, might be reversed by inspecting and suturing primarily the rent structures.

Some may think that the method of effecting dilatation of the imperfectly dilated cervix, by incisions, as recently recommended, might have been practiced in this case. While the cervix was imperfectly dilated for a full passage of the fetal head, still it was dilatable. The delay in the fetal head delivery was from the contracted pelvis of the mother. It has always seemed to me that this obstetric surgical procedure of incisions of the cervix is adapted for cases only in which the imperfect dilatation is owing to morbid organic changes within the structure of the cervical lips, and not to cases of imperfect dilatation from functional causes. While dilatation was about three-fourths complete when podalic version was performed, the cervix was soft and dilatable. This, then, is not a condition calling for cervical incisions.

DISCUSSION.

DR. E. W. MITCHELL: I had the pleasure of seeing this case with Dr. Palmer, as he has stated, and I can certainly congratulate the doctor on the result, both to the mother and to the child. I expected the child would be asphyxiated beyond recovery, and I certainly think the doctor has every reason to be congratulated upon the skill he showed in the management of the case, which was unusally perplexing from the beginning to the end.

These cases of infantile cervix are always troublesome. They are slow in dilating, and they are far more liable to occur in women who are delicate and have not very great muscular strength; the woman becomes exhausted and worn out, and they are almost certain to be lacerated, no matter in what way the delivery occurs. The question might arise whether the use of electricity in this case might not have altered the normal tissues so as to predispose to the rigidity and the liability to laceration. From the fact that a cervix like this will almost always be lacerated any way, I think it is doubtful whether the electricity has any such effect. When I saw the case there was in my mind no question whatever but we had come to the right conclusion, that the time had arrived when the woman should be delivered. The cervix was sufficiently dilated and sufficiently dilatable for the dilatation to be completed by podalic version.

As to whether the cervix should be immediately repaired: After we had repaired the perineum and placed a suture in the bulbo vestibule, the hemorrhage at first seemed to have ceased, but when we found it was coming from the lacerated cervix. I have never made a practice of the immediate repair of the cervix. It is an operation that is not so difficult to do at this time, and yet then your patient is exhausted and the friends are anxious that she shall rest, it takes a certain amount of tact to get the consent of the patient and friends to proceed with the repair of the cervix as well as some courage on the part of the operator to go ahead with it. I think the best practice, probably, would be to repair it immediately, and I am not sure but I shall come to that practice.

In this case the doctor tells me the repair of the cervix was very good after the stitching. The case illustrates the value of the speculum in cases of deformity.

DR. C. E. CALDWELL: The case which I wish to report was seen by Dr. Porter with me nearly two years ago.

I was called to deliver a dwarf, forty-one years of age, and a primapara. I found the pelvis small, but there seemed to be no irregular contracture. I did not use a pelvimeter, but I made up my mind that a fair-sized fetal head could be deliv-

ered. I was called to see her in the night. I came to the conclusion that the head would not be discharged spontaneously, and I called Dr. Porter, who administered chloroform while I proceeded to apply the forceps. When I tried to apply them it seemed they were almost wedged between the head and the pelvic bones. They were finally adjusted, and the head with great difficulty delivered, after which the child was quickly delivered. There was a laceration of the perineum laterally, which also ran up quite a distance. The cervix was torn, and there seemed to be nothing to do but to repair everything. I think about fifteen stitches were introduced. The patient recovered uninterruptedly, and in three weeks was doing her own work. She has since been in perfect health.

I am persuaded, where there is a laceration and a large surface for absorption, the only thing to do is to primarily unite the cervical wound. Of course this is to be done only when the patient is able to stand it, but even when considerably exhausted the few extra minutes spent in a repair of the cervix is to the advantage of the woman rather than to her disadvantage. It seems to me there will then be no necessity for a second trachelorrhaphy.

Dr. Wenning: Whatever I have to say will not be said in criticism of Dr. Palmer's case. It is always easier to tell afterward what could best be done. It seems to me, considering the length of the first stage, that this was a typical case for deep incisions of the cervix, and it is in just such cases that they are recommended. Possibly, if that had been done earlier, the labor would have terminated sooner with less difficulty. This, of course, is an intentional traumatism, and we cannot tell how far the laceration would have extended beyond the cut surface. Nevertheless, if we can carry the incision just to the proper degree, so we can introduce the hand or instrument, I think it would likely obviate the necessity of a laceration, which would otherwise inevitably occur. Therefore, why not make an incision sufficient to introduce the hand and deliver? This, of course, brings us to the question of suturing. In every case the cervix should be sutured, just as any other wound. I think in the great majority of cases it is not necessary. The primipara always have a laceration of the cervix, just as well as of the fourchutte, but if it does not extend very far up the hemorrhage will not amount to much. If there is a spurting of a ruptured vessel it should be sutured. The deep incisions are necessary sometimes for a double purpose: First, to prevent further hemorrhage; second, to insure against infection.

Dr. Bodifield: It seems to me there is one other question that might be brought up, and that is whether it is worth our while to try to cure sterility in cases of infantile cervix.

I have never been in the habit of suturing the cervix unless there is considerable hemorrhage. I think frequently there will be good union, and not enough scar to amount to anything. I have always had some hesitation about making what seems to the bystander such a formidable operation. Of course, if the hemorrhage is sufficient to be alarming, it should be stopped as well as if it were from any other part.

Treatment of Cerebro-Spinal Meningitis by Hot Baths.

Dr. Aufrecht (*La Semaine Médicale*, No. 48, 1894) in a case of seemingly desperate cerebro-spinal meningitis obtained remarkable results with very warm baths. The case in question was that of a workman of twenty-six years, at the third week of the disease. For ten days he had been comatose with subnormal temperature (36° C.), and a rapid and small pulse. Subcutaneous injections of camphor and the internal use of the iodide of potash led to no results, while his condition continued to grow worse steadily. On account of the cold and collapsed condition of the patient Aufrecht tried very warm baths. After the first ten baths at a temperature of 40° C., and of ten minutes duration, he remarked a notable amelioration. The patient came to himself little by little, the stiffness of the nuchal muscles and the strabismus decreased more and more, and after twelve baths, all the morbid symptoms disappeared completely and definitively.—Translated for The Medical and Surgical Reporter by the Translator, F. H. Pritchard, A. M., M. D.

CURRENT LITERATURE REVIEWED.

IN CHARGE OF ELLISTON J. MORRIS, M. D., AND SAMUEL M. WILSON, M. D.

NEW ORLEANS MEDICAL AND SURGICAL JOURNAL

for July. Dr. A. J. Bloch gives some of his experience with cases of

Sexual Perversion in Females.

He divides his subject under three heads of the Krafft-Ebing classification. "Paradoxia-sexual excitement occurring independently of the period of physiological processes in the sexual organs." "Hyperæsthesia—Increased desire." "Paræsthesia—Perversion of the sexual instinct—excitement from inadequate stimuli."

Cases are described under these heads:—a girl of 14 complaining of nervousness and pallor, and failing to improve under tonics and exercise, was examined carefully and the clitoris being found bound down by its prepuce was liberated, and the girl stopping masturbation, which she had practiced, improved in health.

The second case was a girl of 2½ years, whose mother is a victim of the habit, and with other neurotic antecedents. In this case liberation of adhesions was insufficient, and the clitoris was removed as completely as possible, almost at the pubic attachments.

Another case, classified as hyperæsthesia resulting from paradoxia, was a young girl complaining of retention of urine. The complaint was without foundation, but each catherization cau ed an orgasm.

Another case was a married woman, a masturbator, who found no enjoyment in natural intercourse, The removal of cystic ovaries led to a great improvement in general health and ended in a cure.

Still another case was a woman complaining of a swelling in the mammary gland. The gentlest manipulation led to an orgasm, and the swelling proved to be purposely produced.

Dr. E. D. Martin reports a case of

Simple Hypertrophy of the Mammary Glands.

The patient was an anæmic, though well-grown colored girl of 14 years. The breasts were about thirty-seven inches in circumference, and weighed about ten pounds each, and though causing lancinating pains were complained of mainly on account of their size and weight. Large doses of iodide were ineffectually given for a while, after which the glands were excised separately and the patient improved greatly in general health. The glands were edeno fibromata. The case is reported to show the uselessness of iodide in humors of this size, and the author thinks it ineffectual, even in small humors, if they are not syphlitic.

Other papers in this issue are on "Diagnosis of Hepatic Colic," by Dr. E. M. Deparquier; "Two Cases of Suppurative Endometritis," by Dr. P. Michinard; also reports of the proceedings of the Clinical Society of Maryland, Morehouse Medical Society, Louisiana State Medical Society, and Orleans Parish Medical Society.

PERISCOPE.

IN CHARGE OF WM. E. PARKE, A.M., M. D.

MEDICINE.

Chlorine Water in Diphtheria.

Dr. Schubert reports on the value of chlorine water in diphtheria. After an experience of many years he is most enthusiastic on the subject, claiming that no known treatment equals that of internal administration of chlorine water.

He gives a teaspoonful of a mixture consisting of two parts of chlorine water, and one part of distilled water, repeating every two or three hours according to the gravity of the attack. On account of the pungent odor the nose may be held for smaller children. Gargling or painting the throat is superfluous, but no water should be given after the draught. As a prophylactic the foregoing mixture may be given two or three times daily.—*Dental Med. Wochen.*

Croup.

To summarize briefly the medical treatment of croup that will give the little victim the best chance of recovery is as follows: A warm room, the air of which is to be saturated with moisture; an emetic of turpeth minerol *to be repeated whenever the respiration becomes embarrassed;* if the bowels are constipated, a sufficient amount of mild chloride of mercury to move them thoroughly; ice to the throat, either in a rubber bag or bladder; if thirst exists, pellets of ice internally; quinine *to decided cinchonism, which is to be maintained;* a sufficient amount of hydrate of chloral to allay spasms of the air passages, with decided doses of belladonna; the inhalation of steam, medicated or not as may suit the peculiar belief of the individual practitioner; the juice of the pineapple, trypsin with carbonate of soda in warm water; to be supplemented by the administration of a suitable amount of easily digested food.—*Medical Brief.*

SURGERY.

Morton's Disease.

Bosc (*Arch. Gen. de Med.*, July, 1894), begins a study of this metatarsal neuralgia. It is limited to the anterior part of the foot, and to the metatarso-phalangeal joint, usually of the fourth toe. The disease consists in attacks of pain, generally localized to this joint, but at times radiating to adjacent parts. The attack begins suddenly, and the pain may be excruciating, the patient often feeling compelled to take off his boots. Walking is prevented, and the leg is flexed. The pain usually ceases rapidly on repose, but returns as soon as the foot is put to the ground again. The attacks have a variable duration from a few hours to a whole day. They may only recur at long intervals, but occasionally every two or three days The attacks need not be so severe as described above, the pain being more dull. In the less marked attacks the pain may only produce a slight giving of the leg. There may be vague pain during the intervals, and much cutaneous hyperæsthesia. At times the disease may really be termed chronic. The attacks of pain may react on the patient's nervous system; he may become depressed, and is haunted by fears of further attacks. There is absence of any local sign of disease. In the case related here by the author there was, however, some redness over the plantar surface of the metatarso-phalangeal joint, and pressure here produced the pain. There was also marked hyperæsthesia.—*Ibid.*

Railway Spine.

The great increase in railway travel has brought into prominence certain surgical injuries which assume great importance. These Dr. H. J. Saunders classifies, in the *Columbia Medical Journal*, into those in which some visible mischief is done, and those where no apparent harm has been sustained at the time of the accident. It is for the latter class of cases that railways are so often sued. The means of diagnosis are:

1. The absence of any apparent injury to the spine adequate to cause disorganization or derangement of the cord.
2. The time of development of the disability.
3. The nature of the symptoms.
4. The history of the patient, both personal and family.
5. Certain diagnostic symptoms to be discovered by careful examination of the organs of the body, such as changes in the fundus of the eye, the reaction of degeneration, lessened or exaggerated tendon reflexes, etc.

Too much care cannot be exercised in giving the prognosis in these cases.

A Disease-Proof Suit of Clothes.

A "disease-proof" suit of clothes, intended to be worn by an operating surgeon, has been patented at Washington. According to the description given to it, it is a complete suit of rubber armor, resembling the dress of an ordinary diver, and is constructed on air-tight principles, so that no disease germs can enter. There is a small pair of bellows beneath each foot, which, being compressed by the action of walking, blows fresh air in an ingenious manner through the armor. This air enters and is filtered through a germ-proof diaphragm under each of the feet, passing upward and out through another diaphragm arranged at the top of the head.—*Canadian Practitioner.*

OBSTETRICS.

Treatment of Early Abortion.

A conservative treatment of early abortion is recommended by Schauta, of Vienna, in a recent article. The old rule that pain and hemorrhage combined mean inevitable abortion he does not indorse, and thinks the accident preventable as long as the hemorrhage is not excessive or the cervix dilated He does not try to check the bleeding and trusts to rest, which is continued for eight days after the last bleeding. In those cases where the os dilates and abortion becomes inevitable he tampons with a strip of iodoform gauze, about two yards long and the width of three or four fingers breadth. He prefers to retract the perineum with the fingers of the other hand instead of using the speculum and renews the tampon at the end of twenty-four hours at the latest, removing it sooner if the appearance of sacral pains indicates that the ovum has been exposed from the womb. This method of treatment is in sharp contrast to the radical advice so often given of late to go in at once and curette out the womb as soon as an abortion becomes inevitable, a practice which Schauta objects to because of the danger of leaving fragments of membrane behind.— *Western Lancet.*

The Diagnosis of Extra-Uterine Pregnancy.

The following symptoms suggest ectopic pregnancy:

1. The absence of menstruation, or a flow coming at irregular intervals and of uncertain duration.
2. Pain of severe and spasmodic character, which may be permanent at first, then absent for some weeks, to return later with renewed vigor.
3. Vaginal discoloration — a symptom of some importance, yet often noticed in cases where some other form of pelvic tumor is present.
4. General signs of pregnancy, such as nausea, enlarged and tender breasts, increase in size of the papillæ, darkened aureolæ, milk in the breasts, ballottement, the presence of a tumor, irregular menstruation, and possibly gait.
5. The history of having had a child or miscarriage. This is important, as cases occurring in nulliparous women are rare.
5. Expulsion of decidua. This symptom is of great importance, although in the majority of cases we are not fortunate enough to have it present, or if present the clot and shreds of

tissue are thrown away before a microscopic examination can be made.

7. Increase in size of the uterus, with the fundus either pushed forward or to the right or left side.

8. Elongated, soft, and patulous cervix.

9. The appendages on one side containing a thin-walled and tender cyst. The fact, however, that a tumor is felt upon both sides should have no bearing upon the diagnosis, as one of the tumors may be due to extra-uterine pregnancy, and the other to some other form of tubal, ovarian or pelvic trouble.

10. Pulsation of vessels in neighborhood of cyst.

11. The rapid increase in the size of the tumor.

12. Presence of fœtal heart sounds.

13. Presence of placental bruit.

14. Feeling the small parts of the child, either through the vagina or rectum, or by combined manipulation.

With diagnosis made the author holds that the right policy is to operate.—G. H. Haven, in *Bost. Med. and Surg. Jour.*

Sore Nipples.

Dr. T. E. Teter, in *Omaha Clinic*, says: If the following sentence, "A sore nipple causes great pain when the child nurses," which occurs in a very valuable "System of Obstetrics," was reversed, it would approach my experience with this important disease. I have found great pain when the child nurses is generally followed by inflammation, excoriation, fissure and sometimes mastitis. The pain which is the first symptom of sore nipple is caused by sudden tension on the lactiferous ducts produced by the child each time it begins to nurse until the nipple is elongated sufficient to fill the child's mouth and to allow it to swallow without losing its hold. There is a constant jerking, with friction between the tongue and nipple. Acting on this theory, I have directed the mother or nurse to manipulate nipple and areolæ between the thumb and two fingers, using vaseline and drawing gently outward for about a minute. The child is then put to the breast and nurses gently, saving the mother that agonizing pain which is generally experienced in a case of short nipples. I have yet to hear of a case where the pain has not been relieved by this method, and I have seen deep fissures heal in a few days after this relief from pain. If mothers were treated for retracted nipples immediately after confinement, there would be few cases of sore nipples; and as long as the women of the present day will not recognize the evil effects of the corset, there will exist this condition of short nipples.—*New Eng. Med. Monthly.*

THERAPEUTICS.

The Food Value of Real Graham Bread.

Dr. Bardet (*Medical Week*) says: There is at present a marked tendency to return to the use of natural or Graham bread, made out of the whole grain. This tendency should be encouraged on dietetic and therapeutical grounds, because bread made in this way contains 40 instead of 20 per cent. of gluten, and contains twice as large a proportion of certain salts, particularly the assimilable phosphates, as that found in white bread, while it also contains the laxative fatty matter of the germ, which has been removed from the latter. These are indisputable advantages which it behooves us to utilize, at any rate in certain cases.

There is no doubt, for instance, that this bread furnishes vegetarians and the poorer classes with a much needed addition to their nitrogenous food Persons who are constipated, either by temperament or diet (milk diet, for example), will also derive great benefit from the use of Graham bread, owing to the laxative properties of the wheat oil. On the other hand, it would be a decided error to recommend its use to persons who are accustomed to an abundant meat diet, because in their case it would constitute an alimentary excess.

In order, moreover, to be really beneficial, Graham bread must be made of true Graham flour, consisting of the whole grain, especially the bran, finely ground up together, instead of being merely a mixture of bran, rye and ordinary flour, which unfortunately is what is usually sold under that name. It is very easy, however, to recognize the true Graham bread by its homogenous substance, without visible particles of bran, and its distinct, pleasant wheaten odor.—*N. A. Practitioner.*

PHYSIOLOGY.

The "Soul" Has Lost its Seat.

The abstract theory advanced by "Descarles" that the pituitary gland is the seat of the soul has at last been exploded, and the proper functions of the gland demonstrated almost beyond a doubt. A summing up of the researches of many experiments upon the lower animals and of observed symptoms in human beings in whom the pituitary body presented pathological conditions, upon section, goes to show that the pituitary is a trophic gland to the nervous system, regulating the chemical composition of the ventriculo-spinal fluid by supplying needed neutralizing acids and eliminating the products of oxidation and metamorphosis.

In rabbits deprived of the gland and in human beings where the gland had undergone pathological changes a marked swelling of the head and thickening of the skin with trophic changes, "akromegali," were observed. The following additional symptoms indicating auto-intoxication of the organism from deficient cerebral metamorphosis and elimination of the products of oxidation were observed in human beings: 1. Headache (frontal); 2. Sense of suffocation; 3. Digestive disturbances; 4. Eye symptoms, first in one, then in the other eye, such as amblyopia, hemianopia, permanent or intermittent amaurosis, strabismus, ptosis and exophthalmia; 4. Dullness and apathy; 5. Impaired memory; 6. Motor disturbances of the muscular system; 7. and, finally, death by coma.—*Pacific Med. Jour. Trans.*

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ORIGINAL ARTICLES.

PLASTIC SURGERY IN GYNECOLOGY.

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The practice of surgery in all its branches requires a mechanical trend and an ability to devise means to accomplish a given end. All surgery is a species of civil engineering. It is a means of overcoming deficiencies or derelictions in the animal mechanical economy. If nature has been faulty in her distribution of the raw material, surgery comes to her assistance and adjusts the mechanical balance of affairs, as in the club foot, hypospadias, cleft palate, or wry-neck. If there has been an accident to the economy, surgery steps in with the engineering problem to be solved, what is to be removed and what is to be repaired, or what new means is to be found to regain a lost function or repair a damaged one. Now in all this it is evident that the mechanics of the part affected must be thoroughly understood before its repair can be accomplished, or intelligently undertaken. Once understood, a function may be imitated mechanically; artificial legs can run a bicycle or a foot race, and artificial hands accomplish many of the nicest manœuvres. Without such understanding all surgery or indeed any mechanical process is merely experimental and its results but tentative. Herein lies the fault and the failure of many of the mechanical and operative devices in the so-called improved methods of operations.

It requires no surgical genius to stitch a testicle in the inguinal canal in order to cure a hernia, or to perform some similar flighty trick that is novel and idiotic. But this is not surgery. The argument may be followed out indefinitely.

To do efficient plastic work in gynecology, a careful study of the anatomy and physiology of the parts injured and to be dealt with is necessary. Just as the scientific understanding of the mechanism of normal delivery has developed the scientific obstetrical forceps under the name of "Axis Traction," with the consequent diminution of the accidents of labor hitherto observed, so the study of the function of the parts often unavoidably damaged, renders their repair a matter of exact science modified only by the skill of the operator. The mechanism of perineal resistance and fracture is not a matter of chance, and the parts to be restored to function must be replaced in as nearly their physiological condition as possible. A heaping up of tissue here or a splitting there, although simulating a relay of opposing structure, does not necessarily mean strength, and it often happens that the advantage gained is apparent, not real.

Let me then insist that in order to mend a perineum intelligently, the mechanism of labor must be understood and the lines of fracture appreciated. The perineum does not break haphazard but always in well-defined lines, save under instrumental violence, and when tears are due to this

cause they must be dealt with as lacerated wounds anywhere else. The anatomical fractures due simply to obstetric force and resistance must be mended in the lines in which they occur.

Looked at from this standpoint the multitude of operations devised for the repair of the perineum is strangely grotesque. In no other part of the body has so much been attempted with so little scientific knowledge, unless we except that fools' paradise, the abdomen. Operation after operation has been suggested, with this or that name attached to it, without a shadow of justification for existence in the scientific literature of the day. Unfortunately, however, a name often goes as great a distance in surgery as on a forged note, and the operation gains prestige not from its merit but from its introducer. It is not my intention to hold up any special operation to ridicule, but rather to insist that any operation having for its end the remedy of a mechanical deficiency, shall have for its foundation a firm scientific principle and not simply a plausible plea that it brings about a condition which *simulates* the normal. By this it should stand or fall, as it would at once disclose whether it be a really valuable procedure or merely a specious simulation. Without such criterion, it will be necessary to make a careful comparative study of the methods proposed. Meanwhile the younger operator is left floundering in the whirlpool of discussion and claims, while the unfortunate patient is suffering all the inconveniences of experimental surgery. Here let it be formulated that an operation or procedure justified by scientific deduction is never reprehensible; and that the merely experimental procedure should be frowned upon, unless the condition of the patient is so bad that any operation, whatever, must improve her and be a relief.

Under the present abdominal regime of surgery, perineal and plastic work bids fair to become a lost art. The general practitioner is led to look inside the abdomen for all the evils of a woman's flesh, while, too often, it lies in injury done to the bladder or perineum or cervix during labor. Neglected cervical tears do much to render pelvic surgery necessary, while, on the other hand, indiscriminate *cervical* surgery often emphasizes previous *pelvic* disturbance and renders operative interference necessary. Hence will be seen the necessity carefully to discriminate between cases that operation will improve and cases that it will render worse.

In cases of serious pelvic invasion with accompanying lacerated cervix, it is often better, or imperative, first to do the pelvic operation and to follow this, *at another time*, with the cervical repair. I unhesitatingly condemn the plan advised by some to perform internal and external operations at one sitting. Surgery has not for its object the experimental determination of how much endurance the surgeon may possess, nor of how long the sufferer can stand anæsthesia without collapse. That "enough is as good as a feast," is nowhere truer than in the surgery of gynecology. There is enough discomfort incident to the surgery of any one or two of the simpler procedures, without heaping upon this the pain and danger of an abdominal operation.

Apart from the growing discomforts of neglected perineal and cervical lacerations, it must be remembered that the existence of a damaged and defective perineal structure conduces to future difficult and sometimes dangerous labor by predisposing to failure of rotation of the head. In reference to injuries of the cervix, it is always to be remembered that serious laceration of this structure is frequently a cause of after-coming malignant disease, of subinvolution, sterility, congestion and the like; often putting the patient in a condition of chronic invalidism from pain, menorrhagia, dysmenorrhea, displacement and mechanical derangements exhibited in relation with the bladder and rectum.

I have sufficiently dwelt upon the scientific and physiological conditions calling for attention to the surgery of these parts, and have made plain from a scientific standpoint what the requirements of plastic gynecological surgery are. My own practice in this branch of surgery has been to test, as far as possible under the lines laid down, what has seemed to be an advance in the surgery already at command. I regret to say that in many instances my only conclusion has been that I have wasted time and done something my good sense should have forbidden, but after all the good may lie in this—that my own experience may be of use, as here, in suggesting what ought not to be done, teaching negatively by contrasting forbidden

methods with others that have been uniformly successful and beneficial to the patients.

I have reminded you that perineal tears always occur at certain parts of the perineal structure. Without going into the anatomy of the parts or into a discussion of the reason for this fact, it is sufficient to remember, as each one of us with a practical experience must, that these tears are either lateral under the ramus of the pubes, or central extending from vagina toward the rectum. The tears toward the rectum tend to run around it rather than through it, owing to the differentiation of structure in these two tubes. Now, it is to be remembered, that the tears of the vagina are always from within outward, from above downward, and that therefore the external or skin operations for perineal lacerations are essentially non-scientific procedures. All operations for the restoring of the integrity of these parts should be done in the lines of their destruction and, *therefore, from within outward and from above downward.* When the skin of the perineum is involved, mending of this is merely a cosmetic procedure. The cosmetic element too often predominates in many of the so-called perineal devices.

In examining a perineum to determine whether it has been ruptured or not, a mere ocular inspection will not answer. A central tear is almost always visible. Not so a lateral sub-ramic laceration. To detect this the finger should be introduced into the vagina, when the laceration will be determined by the fissure caused by the separation of tissue on one or both sides. The early, prompt, and, if possible, the immediate repair of these tears is to be advised under surgical rules applicable elsewhere in the body. If the patient happens to be too ill or too weak to endure surgical interference, operation is not to be insisted upon. Discretion is to be used here as elsewhere in deciding cases.

The silk-worm-gut with shot is by far the most preferable material to be used for sutures. As little tissue as possible is to be included within the ligature, and strangulation is to be avoided. Early operation precludes the necessity for clipping away even the minutest bit of tissue, and the parts are usually very prompt to heal. When the sphincter ani has been involved, care must be taken to bring the ends of the muscle into apposition. To accomplish this a special stitch is necessary which I shall demonstrate in the discussion. So far as the method is concerned, it is evident to you all that the one suggested is that of Emmet. His procedure stands preëminent among the scientific suggestions and methods of modern gynecology. Its logic is unassailable, and its results cannot be fairly challenged. His work is as delicately true and accurate as an Italian mosaic, while his technique is so simple that to follow it needs only commonplace attention. His demonstration of the scientific value of his method is as accurate as that of any mathematical proposition, and criticism of the ends obtained, or of the method pursued, arises either from ignorance or misunderstanding.

In old tears the method and lines of denudation as indicated in Emmet's own book, are unfortunately obscure. This fact I believe in a measure explains the reason of the operation having so long been questioned, criticised and misunderstood.

Anemia.

In anemic cases the following may be employed:

℞

Strychniae sulphat	gr. ⅓.
Tr. ferri chlor	ʒj.
Vini ergotae	ʒss.
Syr. simplices	ʒiss.
Aq. destill. q. s. ad	ʒvi.

M. Sig.—Teaspoonful three times a day.

—*Med. Press and Circular.*

Syphilis among the Esquimaux.

It has been generally believed that the Esquimaux were immune against syphilis, as no case was observed in one hundred and fifty years, although the infection was known to have been repeatedly taken to Greenland by sailors. After the year 1872 fifty cases were observed amongst the natives of the villages of Foighet and Arsuk; in 1889 only ten cases were observed, while there have been none since 1890. Helms, in discussing the subject, attributes the rarity of the disease to a diminished susceptibility on the part of the natives. Other medical men equally versed in the pathology of the Esquimaux are inclined to ascribe the extinction of syphilis to the treatment and severe hygienic measures adopted by the Danish government, including the isolation of the infected village.—*Universal Medical Journal.*

THE INJECTION TREATMENT OF HERNIA; WITH FORMULA FOR FLUID.

W. H. WALLING, M. D., PHILADELPHIA, PA.

This method of treatment was first experimented with by the elder Pancoast, in 1836. He used the tincture of iodine, and the reaction was so disastrous that the profession very justly condemned the whole procedure. Later on, Heaton, of Boston, and still later, Warren of the same city, reported numerous cures. Their injections not being of a proper character, and not asceptic, and their methods crude, violent inflammations resulted, confining their patients to their beds, if nothing worse. Again was the practice condemned. Others followed in Heaton's footsteps, some however, using still more powerful chemicals, such as sulphate of zinc, iodine, carbolic acid, and even the strong mineral acids, and with like disastrous results.

The method has, however, been again brought forward, but upon a strictly scientific basis.

The treatment of reducible hernia is a very profitable branch of minor surgery that has been almost entirely lost to the medical profession. Fully one-tenth of the population suffer from rupture. Physicians have allowed nearly all of this rich clinical material to go directly to the truss makers, because they could do no more than the truss maker—simply fit a truss.

Such cases may now be reclaimed to the profession by adopting the injection treatment, with a proper fluid, and a suitable syringe. This method is receiving the attention of, and being adopted by, progressive physicians all over the country.

Chemistry has come to our aid in this matter. Substances that are in themselves harmful or obnoxous, by combining them with other substances, or by arranging their elements differently, become useful therapeutic agents or agreeable preparations, as the case may be. Take the oils of rose and the oil, or spirits of turpentine, as examples of elemental arrangement. Both are hydrocarbos. The first has the formula C_{16} H_{34}, the latter, C_{10} H_{16}. This shows the vastly differing products resulting from a different arrangement of their elements.

Then, too, we have new products, from the laboratory; preparations that but a short time ago were scarcely dreamed of, and that are now well nigh indispensible.

Chemistry and surgery, that was accepted ten or twenty years ago, is too far behind the age to be allowable now. Text books not more than five years old, are, in many respects, worthless, so rapid have been the advances.

Applying all this to the treatment of hernia, we find, by using improved instruments and methods, that reducible hernia may be quickly and easily cured without danger, with little discomfort to the patient, and no loss of time; the essentials being a deft hand, a proper fluid, and a trocar and canula syringe, that I have devised for this especial purpose. The technique of the operation for inguinal hernia is as follows: Place the patient on the operating table, reduce the protrusion, if out, wash the parts well with some antiseptic solution, invaginate the scrotum with the index finger and locate the external ring; inject into the skin, at this point, five or more minims of a five per cent. solution of cocaine, to which has been added one drop of a one per cent. solution of nitro glycerine. (Granules of cocaine and glonoin are very convenient for this purpose. Boil the water in a spoon, dissolve the granules in the required amount and inject.) Have the hernial syringe filled with fluid, displace the air, wipe off the drop of fluid that may appear at the needle's end, and carefully note how far the canula must be turned off, in order to entirely cover the needle point. Allow three minutes for the cocaine to take full effect, and having drawn back the canula, exposing the needle-spear, thrust the instrument through the skin and fascia at the point of the cocaine injection. Push it well into the external ring, carefully avoiding the cord. Change the instrument to the other hand, and again invaginate the scrotum, and be sure that the

needle has entered the ring. Then screw down the canula until it covers the point of the needle, and, dipping down with the instrument, pass the canula, by gentle manipulations up the canal to the inner ring. In doing this, bear in mind that the inguinal canal is from one and a half to two inches in length, lying nearly parallel with Poupart's ligament, and about one-half an inch above it.

Having reached the inner ring, slowly inject from three to five minims of fluid, a minim at a time; wait one or two minutes, slightly withdraw the piston of the syringe in order to empty the needle, and withdraw the instrument. Gently massage the parts to evenly distribute the fluid. Cover the puncture with antiseptic collodion. There will be more or less of a burning or smarting sensation experienced by the patient, but by lying quietly for a few moments it will pass off. It may return for a short time when the truss is adjusted, which must be done before the patient rises from the table. He must also be instructed to take off the truss only after lying down at night, and put it on before arising in the morning.

Repeat the operation every five or seven days, according to the amount of fluid used, and the degree of reaction. There will be some soreness for a day or two and the patient must be told this. A certain amount of healthy inflammation must be set up and maintained for a sufficient length of time, in order to effect a cure. From six to twelve injections usually suffice. The older the patient, the longer the time required. A well fitting truss must be adjusted and worn for a few days before operating, in order to see if it keeps the hernia well reduced.

The fee for treatment ranges from $25 to $100, or more, according to the case and the ability to pay; one-half to be in advance. A double rupture should be double pay. In treating these, alternate the injections, first one side, then the other, so as not to produce discomfort. The charge for fitting a truss should be not less than $10, to be paid at once.

Any physician may soon become expert in the above operation. There is absolutely no danger whatever if a proper fluid and instrument be used. In all my cases I have not had a single dangerous symptom, or one bordering on that line. It is well, however, to commence with a minimum dose, and increase as may be indicated.

With an ordinary hernia, in a vigorous, healthy individual, after the sixth injection the treatment may be suspended for a few weeks; then test the parts by taking off the truss, allowing the patient to stand up, and thus determine whether any further injections may be necessary. The truss should be worn for from three to six months after treatment ceases.

In some forms of rupture, where the canal has become obliterated, as well as in old or very fat patients, it may be advisable not to lay aside the truss at all.

Rupture in children is sometimes cured with a single injection. The dose with the little ones must be light.

The fluid that I use has the following composition:

℞

Complex Salts of Aldehyde	30	per cent.
Iodo-Ethylate of Guaiacol	30	" "
Sulpho-Tannate of Zinc	20	" "
Free Guaiacol	5	" "
Beechwood Creasote	15	" "

These rare and delicate chemicals are separately prepared, then carefully combined and dissolved in an antiseptic medium, in strict conformity with their respective affinities and dosage. Injection dose, three to five minims.

I use the same fluid in the treatment of hydrocele and varicocele. Rinse out the syringe and needles with alcohol; never with water. Do not allow water to come in contact with the fluid; water decomposes it.

Permanganate of Potash as an Antidote to the Cyanides.

Dr. J. V. Kossa (*Central-Blatt f. d. Medicinischen Wissenschaften*, No. 17, 1894,) from experiments on animals claims that the permanganate of potash is an efficient antidote to hydrocyanic acid and the cyanides. A dose of over ten times greater than the fatal one was given to rabbits and immediately followed by the permanganate; no symptons of poisoning followed. The potash salt oxydizes the poisonous compounds into innocuous preparations.—Translated for the MEDICAL AND SURGICAL REPORTER by the Translator, F. H. Pritchard, A. M., M. D.

COMMUNICATIONS.

THE ETIOLOGY, PATHOLOGY, AND TREATMENT OF INTESTINAL FISTULA AND ARTIFICIAL ANUS.*

N. SENN, M. D., PH. D., LL. D.†

A correct appreciation of the causes which give rise to the formation of intestinal fistula is prerequisite for the adoption of appropriate treatment. The term intestinal fistula will be used in this paper to signify a communication between the lumen of any part of the intestinal tract and the surface of the body or with any of the hollow abdominal or pelvic viscera. A practical distinction must be made in regard to the size and character of such abnormal communication into 1, fistula; 2, artificial anus. The difference is one of degree and not of kind. Speaking from a purely surgical standpoint, a fistula of the bowels is an opening through which gas or only a part of the liquid and solid intestinal contents escape, while an artificial anus implies a complete interruption of the fecal circulation at the abnormal outlet. The latter condition is determined either by the size of the defect in the intestinal wall or the existence of mechanical conditions which divert the intestinal contents in the direction of the abnormal outlet and away from the distal side of the bowel. The mechanical conditions which thus divert the fecal current are either a flexion or the presence of a spur or septum at a point opposite to the abnormal outlet, caused by the projection of the intact part of the intestinal wall in the direction of fistulous opening. The surgeon aims to produce such an obstruction to the fecal circulation when he desires to procure rest for the distal part of the intestinal tract by the formation of an intentional artificial anus. The amount of intestinal contents which escapes from the intestinal canal through such an abnormal outlet depends less on the size of the opening than the existence of one or both of the above mentioned mechanical conditions. If the intestinal tube is straight or only slightly curved, even a large opening may resemble a simple intestinal fistula, while on the other hand, a small opening associated with a flexion, or a well-developed spur, appears clinically as an artificial anus and must be treated as such. The internal fistulæ communicate most frequently with another part of the intestinal tract, the bimucous fistula of Dreshfeld with the bladder, vagina, and uterus.

ETIOLOGY. Intestinal fistulæ are divided into: 1. Intentional. 2. Accidental. The surgeon occasionally resorts to the formation of an intestinal fistula or artificial anus, in the treatment of inoperable mechanical obstruction, by resorting to a colostomy or enterostomy, according to the location of the mechanical obstacle which has necessitated the operation. If in such cases the intestinal opening is to serve only a temporary purpose, it is closed by operative measures in the same manner as will be advised in the discussion of the operative treatment of accidental fistula, after the distal part of the intestinal canal has been rendered permeable spontaneously or by subsequent operative interference.

Accidental fistulæ are produced, according to the immediate cause, by: 1. Gunshot and stab wounds of the abdomen. 2. Submural injury of the bowel. 3. Ulceration of the bowel. 4. Strangulation of bowel. 5. Foreign bodies in intestinal canal. 6. Malignant tumors. 7. Intestinal actinomycosis. 8. Pelvic and other abdominal abscesses. 9. Appendicitis. 10. Unintentional injury to the bowel during abdominal and pelvic operations. 11. Ligatures. 12. Sutures. 13. Drainage tubes.

GUNSHOT AND STAB WOUNDS. These injuries usually result in fatal septic peritonitis if the intestinal wound or wounds are large enough to permit escape of fecal material into the free peritoneal cavity, and not subjected in time to the direct operative treatment. A fecal fistula, ex-

* Inaugural thesis before the Gynecological Society of Chicago, June 15th, 1894.

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ternal or internal, may result if the wound is small or if only a part of the intestinal wall has been injured, in which event the injured part becomes adherent to the parietal peritoneum or an adjacent hollow organ. A resulting circumscribed abscess may later under such circumstances, perforate the abdominal wall or discharge its contents into the adherent organ and thus establish either an external or internal fistula. According to the experience of surgeons during the War of the Rebellion, such an occurrence is more likely to follow injury of the colon than wounds of the small intestines.

SUBMURAL INJURY. Partial laceration of the intestinal wall without a penetrating wound of the abdomen occasionally results in circumscribed peritonitis, caused by the migration of pathogenic microbes from the intestinal canal through the damaged wall to the surface of the bowel, where, if present in sufficient number, they may produce an abscess which not only completes the intestinal perforation, but may result at the same time in the formation of an external or internal fistula. Such fistulæ are usually small and close spontaneously in the course of time. In suspected submural injury of the bowel without evidences of complete rupture and fecal extravasation, it is of the greatest importance to enforce efficient treatment with a special view of preventing this remote complication.

ULCERATION. Ulceration of the bowel is frequently followed by the formation of an intestinal fistula if the free peritoneal cavity is shut off by adhesions before perforation takes place and the ulcer manifests no tendency to repair. In the upper part of the intestinal canal the round, perforating ulcer of the duodenum may produce such a result. I have observed two cases of perforating typhoid ulcer in which a diffuse abscess formed which was freely incised and drained. In one case the abscess cavity contained at least a quart of fecal material which had evidently been accumulating for more than a week. The patient's general condition was such as to contraindicate search for and suturing of the perforation. In both cases life was prolonged from one to two weeks, but the patients finally succumbed to sepsis. I can readily conceive that under more favorable circumstances such patients might recover under similar treatment with an intestinal fistula which would in all probability heal spontaneously or could be closed later by operation with a good prospect of success. From my own personal observation I am satisfied that the ulcers which terminate most frequently in the formation of an intestinal fistula are of a tubercular character. I have observed a number of such instances.

The clinical course in such cases is almost typical. The localized peri-intestinal process is usually preceded by symptoms which point to a chronic catarrhal or ulcerative enteritis. A painless, cold abscess appears at the point where the perforated bowel has become attached to the abdominal wall. The abscess develops insidiously and progresses very slowly. If the abscess opens spontaneously or is incised, it contains, as a rule, no fecal material. The fistula forms later, or is produced at once if the granulations lining the abscess wall are scraped away with a sharp spoon. The communicating opening between the lumen of the bowel and the abscess cavity is temporarily blocked with granulations which, when removed or when destroyed by suppuration and degeneration, establish the fistula through which gas and fecal contents escape. In one case I found such an abscess in the umbilical region, and in another in the right linea semilunaris. In both cases a fecal fistula was established, and the patients eventually died from the effects of the primary intestinal infection. Such fistulae hasten the fatal termination and are not amenable to successful surgical treatment. Tubercular abscesses in communication with a perforated intestinal tubercular ulcer should not be incised. The proper treatment for such cases is tapping of the abscess, followed by injection of iodoform emulsion, a form of treatment which will postpone, if not prevent, the formation of intestinal fistula. König is of the opinion that in many cases of tubercular intestinal fistula the primary disease starts in the peritoneum, resulting in perforation of the intestine from without inward. In such cases multiple fistulae are often established in rapid succession.

STRANGULATION. The functional disturbance of the intestine following strangulated hernia, terminating in gangrene without treatment or under conservative measures, will depend upon the extent of loss of mural tissue, and will vary from a

small fistula only large enough to permit the escape of gas to a perfect artificial anus. Occasionally such an accident follows the reposition by taxis of a damaged intestinal loop. The Littre, femoral and properitoneal herniæ are most likely to be overlooked by the surgeon, and consequently most frequently give rise to this complication.

FOREIGN BODIES. Perforation of the intestinal wall by a foreign body, preceded by a circumscribed plastic peritonitis, frequently results in the formation of an abscess which, when it reaches the surface or an adjacent hollow organ, is followed by an intestinal fistula. Small, slender foreign bodies, such as needles, pins and fish bones, often perforate the intestinal wall and find their way to the surface or into neighboring organs without giving rise to an intestinal fistula. In one case I removed four fish bones from a small abscess in the median line below the umbilicus, after which the abscess healed promptly and permanently. The foreign bodies which are most frequently found in abscesses preceding intestinal fistula are sharp fragments of bone, gall stones, and enteroliths.

MALIGNANT TUMORS. Malignant tumors may cause intestinal fistula either by producing obstruction followed by distention and ulceration on the proximal side or by directly implicating the intestinal wall. The latter mode of origin is the most common. The malignant tumor in such instances invades by contiguity the part or organ which becomes the seat of the intestinal fistula, and at the same time perforates the intestinal wall, so that the fistula is surrounded everywhere by malignant tissue. Carcinoma more frequently pursues such a course than sarcoma. Infection of the malignant tumor with pus microbes plays often an important role in such cases. The supperative infection often overshadows the malignant disease so completely that the surgeon is misled in his diagnosis, and institutes treatment appropriate for abscess when the operation reveals a malignant tumor as the foundation of the difficulty. Carcinoma of the cecum complicated by suppuration has been repeatedly mistaken for appendicitis. Carcinoma of the sigmoid flexure and cecum occasionally results in a pathological anastomosis between the affected part of the bowel and an adjacent loop of the small intestine. Carcinoma of the upper part of the rectum only too often invades the bladder and results in the formation of a recto-visical fistula. Carcinoma of the stomach and transverse colon has resulted in pathological grastrocolostomy.

ACTINOMYCOSIS. A number of cases of intestinal actinomycosis have been recorded in which the disease in its course perforated the intestinal wall and gave rise to diffuse abscesses and intestinal fistula. The ileo-cecal region is the favorite locality for such processes. In the only case of this kind that came under my own observation the disease originated evidently in the ileo-cecal region, but the abscess reached the cavity of Retzius and was opened in the median line above the pubes.

PELVIC AND ABDOMINAL ABSCESSES. By far the most frequent cause of intestinal fistula is pelvic and abdominal abscesses. Such abscesses sometimes are caused by migration of pyogenic microbes through a damaged or inflamed intestinal wall, perforating later the intestines, and finally open or are incised on the surface when the fistula is completed. The fistulous tract is often long and tortuous. More frequently a pyosalpinx or acute phlegmonous abscess of the parauterine connective tissue pursues such a course. Such abscesses open most frequently into the rectum, bladder, and intestinal coils upon the floor of the pelvis, but they may open into the cecum and sigmoid flexure. Externally they point most frequently in the groin, but they may also reach the surface through the sacro-sciatic notch and occassionally extend to the lumbar region. The external fistulous opening may be found in any of these localities. Not an infrequent cause of intestinal fistula is tubercular abscess resulting from tubercular spondylitis and tuberculosis of the pelvic bones. In some cases the abscess is discharged first into the cecum or rectum; less frequently into other parts of the large and small intestines, and later reaches the surface; or the fistula forms in the course of suppurating tubercular tracts. Rectal insufflation is an exceedingly valuable diagnostic test, not only for the purpose of ascertaining whether or not the fistulous tract communicates with the intestine, but also in demonstrating the exact location of the intestinal perforation.

APPENDICITIS. Appendicitis is the most frequent cause of intestinal fistula in the illeocecal region. The fistula is produced in one of two ways: 1. Sloughing or perforation of the appendix. 2. Rupture of an abscess of appendical origin into the secum or adjoining intestinal loops, with the subsequent formation of an external opening. If the entire appendix is cast off as a slough with the contents of the abscess in gangrenous appendicitis, the fistulous opening involves the cecum and occupies that part of the bowel to which the appendix is attached. Clinically such a fistula resembles a cecal fistula produced by other causes. In partial gangrene of the appendix and perforation of the organ, treated upon the expectant plan by incision and drainage without removal of the appendix, if a fistula persists, the remaining lumen of the appendix communicates with the cecum on one side and the external fistulous tract on the other. The fistulous opening into the bowel under these circumstances is so small that seldom anything else but gas escapes. Such fistula occasionally heals; spontaneously in the course of a few weeks; but after it has become well established, closure of the fistula without operation is not to be expected. A paratyphlitic abscess rupturing into the cecum often terminates into a permanent cure, but sometimes it results in extensive destruction of the cecal wall followed by the formation of a correspondingly large fistulous opening. The location of the cecal opening will vary according to the situation of the abscess. The cases of cecal fistula which have come under my own observation involved either the anterior or posterior wall; but they may affect any part of cecum, and occasionally the abscess ascends in the direction of the ascending colon, which it may peoforate and cause a fistula of this part of the large intestine. I have seen three cases of fistula of the cecum following appendicitis in which the opening of the abdominal wall and cecum was large enough to insert three fingers. In all these cases the fecal current was arrested at the opening by the presence of an effective spur formed by the projection of the opposite wall toward the opening in the cecum. It is in cases of this kind, if the abscess has been opened by the surgeon, that he is credited by the patients and friends with having cut the bowel, when in reality the intestinal opening either was present at the time the operation was made or occurred later by sloughing of the inflamed cecal wall.

INJURY OF BOWEL DURING ABDOMINAL AND PELVIC OPERATIONS. Under this head it is not my intention to discuss those gross lesions of the intestines occurring during abdominal and pelvic operations which the surgeon recognizes at once and resorts to the necessary treatment. I wish more particularly to refer to overlooked and incomplete wounds of the bowel as causes of intestinal fistula. Modern gynecology encourages heroic attempts in the removal of abdominal and pelvic tumors that only a few years ago would have been regarded as inoperable by the boldest surgeons. The removal of adherent tumors and pus tubes brings the operator often in very close contact with the intestines. The inflammatory processes which have produced the firm adhesions have often resulted in great damage to the adherent part of the intestine. The intestinal wall, from pressure, cicatricial contraction, and impaired nutrition, is often found not much thicker than ordinary writing paper, hence exceedingly liable to be torn during the separation of firm adhesions. The intestine attached to a tumor or pelvic abscess by firm and old adhesions has lost its outer or peritoneal coat over an area corresponding with the extent of the adhesions. Unless the surgeon practices the necessary precaution of making the detachment at the expense of the tumor or tube, if he does not tear an opening into the bowel he will, at least, seriously damage the intestinal wall. I have no doubt that in numerous instances of this kind surgeons have overlooked minute perforations in the bowel which, if they did not result in fatal septic peritonitis, became the direct source later of an intestinal fistula. It must also be remembered that a greatly damaged intestinal wall is permeable to pyogenic microbes, and consequently becomes not infrequently the sole cause of a late infection after laparotomy, and if the patient survives, of abscess and intestinal fistula. Every experienced surgeon will recall to his memory such mishaps when he could assure himself that in other respects the operation was faultlessly performed. The examination of detached intestinal loops for perforations or other serious damage should not be postponed

until completion of the operation, as it may be impossible to find them again at that time. The inspection should be made at once and all defects remedied before additional adhesions are separated. By pursuing such a course, and by detaching the adhesions at the expense of the part to be removed, we will hear less in the future of septic peritonitis, abscess and intestinal fistula arising from this cause after laparotomy.

LIGATURES. In small wounds and limited gangrene of the bowel Astley Cooper made a small cone, the apex of which corresponded with the injury or disease, and applied a ligature of fine silk around the base. The ligature cuts its way into the lumen of the bowel during the time the resulting defect becomes sealed by plastic lymph. We can readily conceive under what circumstances such a procedure would prove safe and efficient. If the parts included in the ligature and the ligature itself are aseptic the formation of a fistula is prevented by the production of new tissue around the ligature and included mass before the ligature reaches the lumen of the bowel. If, on the other hand, the asepsis is not perfect, and suppuration occurs in the track of the ligature, an intestinal perforation is very likely to ensue.

After separation of an adherent intestine bleeding points are often tied with silk. Isolation of the bleeding vessel is usually out of question, and more or less of bowel tissue is included in the ligature. It must not be forgotten that under such conditions the bowel has been deprived of its peritoneal investment, and consequently the facilities for encapsulation of the ligature are diminished. If to this is added an extremely attenuated bowel wall, it is not difficult to understand in what way a ligature may sometimes give rise to a late perforation, peritonitis, abscess, and intestinal fistula.

SUTURES. Careless suturing of the abdominal incision is responsible for many accidents to the intestines. Undue haste in completing this part of the operation is often severely punished. Unless the operator resorts to proper precautions the needle may transfix a part of the circumference of the small intestine; on tying the suture the loop is anchored against the external incision, the ligature later cuts it away through the included part of the bowel, and if a fatal peritonitis does not result an intestinal fistula is sure to follow. I have seen two cases of intestinal fistula, in the practice of distinguished surgeons, where I had reason to believe that the intestinal fistula had such an origin. But this is not the only way in which sutures have produced this complication. In tying the sutures a loop of the underlying intestines may be caught between the suture and the abdominal wall, and on tightening the suture strangulation results, followed by intestinal obstruction, gangrene of the strangulated part of the bowel or coil, abscess and fistula. Again, an intestinal coil may escape between the sutures and become strangulated between the margins of the wound with similar consequences. It is time that surgeons should recognize the suture as a cause of such complications and resort to efficient prophylactic measures. I am strongly convinced of the value of a separate row of buried absorbable peritoneal sutures in closing the abdominal incision, both for the purpose of guarding against accidents to the intestines and as a prophylactic measure against ventral hernia. Whenever it is possible the omentum should be drawn downward far enough to cover the entire length of the incision. The use of the aseptic compress as an aid in suturing the external wound is so well known that it is only necessary to mention it in connection with my subject.

DRAINAGE TUBES. The last, but by no means the least important subject which I shall discuss in connection with the etiology of intestinal fistula is the drainage tube. Prolonged tubular drainage with glass or rubber tubes is a well-known factor in the production of intestinal fistula. The opening in the bowel is produced by pressure atrophy. I am inclined to believe that the elastic pressure caused by rubber drains is more injurious than that exerted by glass tubes. Long-continued tubular drainage for suppurative lesions is more dangerous in this respect than similar methods of drainage for parenchymatous oozing or other aseptic pathological conditions. In the former case the suppurative inflammation along the drainage canal adds to the destructive effect of pressure. It will be difficult, if not impossible, to entirely eliminate this etiological element by any amount of care

in cases requiring long-continued tubular drainage. In recent cases necessitating drainage for a few days I have been in the habit of surrounding the glass or rubber drain by a few layers of iodoform gauze, for the purpose of diminishing the harmful effects of localized pressure. In drainage for suppurative affections it is advisable to gradually reduce the size of the tube for the same reason, and whenever practicable interpose between the intestine and tube a few layers of iodoform gauze.

TREATMENT. The treatment of an intestinal fistula must have for its aim closure of the abnormal opening with as little interference as possible with the lumen of the bowel. The statement has been made, and is borne out by clinical experience, that many intestinal fistulæ close spontaneously. This favorable termination may be expected in cases in which the opening in the bowel is small, the immediate cause of a benign and temporary character, the general health of the patient not much impaired, and the fistulous opening in the bowel so located that it can readily become attached to the parietal peritoneum or the serous investment of an adjacent organ. The spontaneous healing of an intestinal perforation is always followed by permanent parietal or visceral adhesions. In fistulæ resulting from tuberculosis, malignant disease, and actinomycosis, spontaneous healing from the very nature of the primary cause, is out of the question, and in the majority of these cases operative treatment with a view of closing the fistula is contraindicated. The operative treatment in such cases deserves consideration only in the event that the primary cause can be completely eliminated before an attempt is made to restore the continuity of the bowel. In fistula caused by malignant disease, in which the extent of the primary cause has rendered a radical operation inapplicable, it may be advisable to secure rest for the diseased part of the intestine by establishing an artifical anus on the proximal side. In the treatment of tubercular and actinomycotic fistulæ the primary disease must receive proper attention, and, in case it is amenable to successful treatment, the fistula will heal spontaneously or is subjected later to appropriate surgical treatment. Before I proceed further to the discussion of the surgical treatment of intestinal fistula it is important to refer briefly to a few of the more important points of the

PATHOLOGICAL ANATOMY. For the sake of simplicity I will describe the different forms of intestinal fistula as we observe them on the surface of the body, although the same remarks will apply to the internal fistulæ where similar conditions are developed.

INTESTINAL FISTULA. Intestinal fistula as defined in the introductory remarks of this paper presents itself in one of two forms: 1. A fistulous tract leads from the surface to the opening in the intestine. 2. The mucous membrane of the intestine lines the fistulous tract and is continuous with the skin on one side and the mucous lining of the intestine on the other. In the first variety the opening in the bowel is more or less distant from the surface, and the tract is lined by granulations. In the second variety the intestinal wall reaches the surface and the margins of the opening in the bowel form the border of the external opening, the entire fistulous tract being lined by mucous membrane. In both instances the opening in the bowel is lateral, the intestinal tube either straight or slightly curved, presenting no mechanical impediments to the fecal current.

ARTIFICAL ANUS. The interruption, partial or complete, of the fecal current at or in the immediate vicinity of the fistula is usually due to one of three causes: 1. Intestinal obstruction below the fistula. 2. Flexion of the bowel at a point corresponding with the location of the fistula. 3. The presence of a spur opposite the opening in the bowel. If perforation of the bowel takes place in consequence of an intestinal obstruction, the cause or causes which have given rise to this accident maintain the obstruction and all of the intestinal contents escape through the fistula, which then serves the purpose of an artifical anus. If the perforated part of the bowel becomes flexed by adhesions or otherwise, the flexion narrows the lumen of the bowel and directs the fecal current toward the abnormal outlet. Under such circumstances a considerable part of the intestinal contents necessarily escapes through the fistulous opening. If the flexion becomes more acute the intestinal wall opposite the opening forms a spur which when fully developed completely

intercepts the fecal current and transforms the fistulous opening into an artifical anus.

From these remarks it necessarily follows that spontaneous healing can only be expected in cases in which the fistulous tract is not lined by mucous membrane and in which the fecal current meets with no impediment by flexion or spur formation. As the fistulous opening in the bowel is often beyond the reach of an examination to determine the actual conditions, time plays an important part to enable the surgeon to determine whether or not surgical interference is necessary. In the absence of an indicatio vitalis an operation should be postponed until the clinical course has demonstrated that Nature's resources are inadequate to accomplish the desired object. An early operation is demanded if the fistula involves the upper part of the small intestines and the escape of chyle endangers life from inanition. In the absence of such an indication, and in the absence of positive proof that spontaneous healing is impossible, conservative treatment should be continued until the indications for a radical operation are established. A carefully selected diet, attention to the condition of the bowels, rest, compression over the fistulous tract, and antiseptic treatment of the suppurating tract embrace the leading indications of the expectant treatment.

Surgical Treatment. The surgical treatment must be governed by the pathological conditions which characterize each individual case. A careful inquiry concerning the etiology and pathology in each case is therefore necessary in order to enable the surgeon to select the appropriate therapeutic resources.

Cauterization. Cauterization of the fistulous tract is useful not only in expediting spontaneous healing in cases in which such a result is to be anticipated, but also for the purpose of removing anatomical conditions incompatible with such a determination. Nitrate of silver is most efficient in stimulating the process of repair in cases in which the tract is lined by flabby, infected granulations. Benefit from this agent can only be expected if it can be applied the whole length of the canal. Its application is worse than useless if the entire tract is not accessible either on account of its length or tortuous direction. If the fistulous tract is lined by mucous membrane, is short and readily accessible in its whole length, the Paquelin cautery can be resorted to with advantage. The cauterization must be made deep enough to destroy the entire thickness of the mucous membrane. On separtion of the tubular eschar the fistulous opening is enlarged, and for a time more of the intestinal contents escape through it; but in a short time the canal becomes blocked by granulations, which eventually result in its closure. Before using the cautery the length of the tract must be carefully determined, in order to protect the bowel against injury from the point of the instrument. The same instrument is of value in the treatment of larger fistulæ lined by mucous membrane not complicated by mechanical impediments to the fecal circulation. I have resorted to this procedure in a number of cases of surface fistulæ lined by mucous membrane, and have been well satisfied with the results.

Drainage of Abscess Cavity. An abscess cavity interposed between the intestinal opening and the fistulous tract on the surface or in one of the pelvic organs, constitutes often an insurmountable obstacle to spontaneous healing. In many such cases the abscess cavity is imperfectly drained and is being continually contaminated by fecal material. If the abscess is so located that it can be safely and more efficiently drained, such a procedure will often accomplish all that is desired. This method of procedure is particularly indicated in the treatment of pelvic abscesses complicated by intestinal fistula. It must, however, not be forgotten that under such circumstances the organs in the vicinity of the abscess are often displaced by inflammatory adhesions and exposed to injury in efforts to secure better drainage.

Mechanical Repression of Spur. The spur has been recognized as a cause of the persistence of intestinal fistula for a long time, and different methods of treatment have been devised for its removal. Desault advised the insertion of a roll of charpie into the bowel with a view of increasing the size of the lumen of the bowel and of repressing the spur. Banks inserted a large rubber tube, which he fastened in the fistula, for the same purpose. As the formation of the spur takes place in consequence of the flexion of the bowel, we can readily understand why all such mechanical devices have proved of so little value.

REMOVAL OF SPUR. The first efforts to remove the spur by operative procedure were made by Schmalkalden in 1795. He removed the spur with scissors and knife. The disastrous results which must have necessarily followed this operation led Dupuytren to accomplish the same object by a bloodless method. He devised for this purpose a clamp, which he applied to the spur, and by tightening the screws connecting the branches made it cut its way through the tissues by causing linear necrosis of that part of the septum included in its branches. The instrument effects its object in from three to eight days. It is then again applied on the side of the linear section, and the same procedure is repeated until the spur is removed. The results of this operation were quite satisfactory before laparotomy was made a safer procedure.

In 1824 Dupuytren reported forty-one cases, of which number twenty-nine were cured and only three died. Later Heiman collected eighty-three cases with a mortality of 4.83 per cent. The most recent statistics collected by Körte comprise 111 cases with eleven deaths. In many of the cases, however, the fistula remained. After the removal of the spur the margins of the fistula were usually destroyed with the actual cautery. I shall show further on that the spur develops in consequence of flexion, and that if the flexion is arrested in the operative treatment of artificial anus its removal is superfluous. The recent advances made in intestinal surgery will render Dupuytren's operation obsolete in the near future.

CLOSURE OF FISTULA BY PLASTIC OPERATION. The closure of the intestinal fistula by plastic operation was introduced by Diffenbach. It was not his intention, by the operation which he devised, to close the opening of the bowel at once, but to cover it with a bridge of skin, leaving the closure to be accomplished later gradually by granulation. Between two elliptical incisions he excised the margins of the fistulous opening and the skins surrounding it. A bridge of skin is made by making on one side of the oval defect, and the necessary distance from it, a curved incision twice the length of the wound, and, by undermining the skin, a bridge is formed with which to cover the opening. The oval wound is closed by interrupted sutures. The operation leaves a crescent-shaped raw surface produced by sliding the bridge, which was left open to heal granulation. This operation, as well as plastic closure by pedunculated flaps, had their field of usefulness before addominal operations were rendered comparatively safe by an approved technique and the general adoption of aseptic precautions, but are seldom, if ever, resorted to at the present time.

SUTURING OF FISTULA WITHOUT OPENING THE PERITONEAL CAVITY. The closure of an intestinal fistula by vivifying its margins and suturing, without detaching the bowel or opening the peritoneal cavity, has not yielded very satisfactory results. The operation is only adopted for cases in which the intestine is attached to the abdominal wall and the fistulous opening is readibly accessible, and where no canalization impediments are present. I have succeeded in two cases in closing the fistula completely and perfectly by one operation.

In advising a resort to this, as far as life is concerned an absolutely safe operation, I must insist in the first place upon the necessity of freely excising the fistulous tract, removing all of the scar tissue and a circular strip of the mucous membrane lining the margins of the fistulous opening in the bowel, as well as the importance of bringing in accurate apposition the different anatomical structures by several tiers of buried sutures. A conscientious observance of these precautions will frequently reward the surgeon with success in closing an intestinal fistula by extra-peritoneal suturing.

INTESTINAL ANASTOMOSIS. The formation of an intestinal anastomosis in the treatment of an intestinal fistula is indicated in cases in which the extra-peritoneal methods are not applicable or have proved unavailing and the usual intra-peritoneal operations are contra-indicated. Under such circumstances the exclusion from the fecal circulation of the perforated loop by the formation of an anastomotic communication between the afferent and efferent limbs of the loop, will remove the annoyances incident to an intestinal fistula and place the parts in a more favorable condition for spontaneous healing or more successful surgical intervention. The anastomotic opening should be made at least two inches in length. The operation can be

performed most safely by the use of decalcified perforated bone plates or by Czerny-Lembert sutures.

ENTERECTOMY. The mortality attending enterectomy and circular enterorrhaphy in the treatment of intestinal fistula and artificial anus remains great even in the hands of experienced operators. The statistics of Reichel give a mortality of 37.8 per cent., and those of Hertzberg 27 per cent. In view of this fact it is apparent that this operation should be reserved for cases not amenable to successful treatment by safer procedures. I am confident that the indications for this operation can be limited to exceptional cases. If the intestine is not attached to the abdominal wall, it is much safer to open the free peritoneal cavity in search for the affected part of the intestine than to follow the fistulous tract as a guide. If possible, the intestine should be tied on each side of the fistula with a strip of gauze or a rubber band before it is detached, in order to guard more efficiently against fecal extravasation. The operation should be performed with the patient in the Trendelenburg position and the peritoneal cavity amply protected by aseptic compresses during the resection and suturing. After the resection the continuity of the bowel should be restored by circular enterorrhaphy by Czerny-Lembert sutures.

PRELIMINARY TRANSVERSE SUTURING OF THE INTESTINAL OPENING AS A PROPHYLACTIC MEASURE AGAINST INFECTION DURING THE OPERATION FOR ARTIFCIAL ANUS. There can be but little doubt that the operative treatment of intestinal fistula or artificial anus requiring opening of the abdominal cavity has been attended by an alarming mortality, owing to infection caused by the escape of feces through the intestinal opening. Packing the opening with gauze or cotton is a very inefficient way in which to prevent fecal extravasation. The use of clamps and ligatures on each side of the opening in the bowel is equally unreliable. It appears to me the only safeguard against this course of danger is preliminary closure of the intestinal opening by suturing, placing the sutures so close together as to absolutely prevent the escape of any of the intestinal contents. After this has been done the field of operation is once more thoroughly sterilized before the abdomen is opened and the intestine detached. The sutures should include all the tunics of the bowel. With few exceptions this row of sutures will remain as Czerny sutures, to be buried after the bowel has been detached by Lembert stitches. I have already made a statement that I look upon flexion of the bowel as the most important factor in producing the spur, and that measures which are calculated to correct the flexion will prove useful in removing the spur. In artificial anus, produced accidentally or intentionally, the flexion is caused by the prolapse of the intestinal loop into, and sometimes even beyond, the opening in the abdominal wall. If the intestine is detached the flexion is diminished or completely corrected, and its recurrence is prevented by transverse suturing of the intestinal opening. A study of my cases has convinced me that the provisional closure of the intestinal opening by transverse suturing before using the knife is the most efficient prophylactic measure against infection, and that resection of the intestine for fistula and artificial anus can be avoided in the majority of cases, and that in its place transverse suturing and correction of the flexion will yield better results.

TRIONAL.

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I have used trional in a number of cases and found it, unlike any of the sedatives in common use, filling a place for which the pharmacopeia offers no other remedy. Having no anodyne properties, it is a hypnotic *par excellence.*

While opium acts by its benumbing influence upon pain, trional, where pain was absent or relieved by other remedies, relieves the nerve tension, quiets the "in a hurry" feeling, soothes the overwrought nervous system into a state or condition in

which natural sleeps follows, causing no nausea, dullness, derangement of the digestive organs, nor any skin eruption. The patient arises after from five to ten hours sleep with a ravenous appetite.

I do not remember reading of two noteworthy effects from the administration of trional:

First, on awakening, the patient does not have that longing for his morning drink, always noticed in other cases, and does not have that "hollow" feeling in the stomach; and, second, morphine or opium retards the action of trional. The patient in all cases has less tremors and no headache. I have never seen any unpleasant symptoms from the largest doses—grs. xxx. every hour until three doses were taken.

I usually administer the trional in capsules or "konseals." For simple insomnia, grs. xv., one hour before retiring, and the same amount on retiring, if necessary, is the usual quantity I prescribe. This method has given me the best results, and in twenty-one cases, with but one exception and that only for a night, the patients awoke much refreshed after sleeping from five to ten hours.

The following cases will show my plan of treatment and the results obtained:

Case 1. Insomnia, general nervous prostration and phosphaturia. Had not had two hours sleep at any time for more than a week. Trional in grs. xv., doses one hour before and on retiring and every hour until asleep, gave immediate relief. The first night three doses were given, which secured seven hours sleep; after this two doses each night secured from five to seven hours natural sleep, for one week. Since, the patient has taken only grs. xv. each night, and has not lost a single night's sleep in sixteen days.

Case 2. Insomnia, nervousness and enteralgia from an ulcerated colon. Ordered trional, grs. xv. with grs. v. each of phenacetine and acetanalid. The patient slept very well every night it was used.

Case 3. Insomnia, tremors and general nervousness or exhaustion from a protracted spree. Has been drinking large quantities of alcoholic liquors. Ordered grs. xv. trional every hour from 7 P. M. until asleep, and the following:

℞ Potassii bromidi ..... ʒ iii
Ext. cocæ Fluidi.. ..... f ʒ i
Celerinæ..... f ʒ ii

M. Sig.: Take one teaspoonful, in water, every hour tonight and every two hours tomorrow.

After nine hours sleep, he awoke tranquil in nerves and much refreshed, though weak. After a dose of the bromide he ate a hearty breakfast and by continuing the bromide and the acetanilid co. capsules, alternating every hour, had no longing for drink, no nausea, and was able to attend to business in the afternoon.

Case 4. Cocaine habitue having insomnia. Ordered grs. xv. of trional one hour before and upon retiring. This was the only remedy that successfully produced a refreshing sleep for him out of the many tried unsuccessfully.

I have used it as an anhydrotic with more satisfactory results than any other I have ever tried. I believe after a thorough trial that trional is a safe and reliable hypnotic and an anhydrotic of great value. It never causes any unpleasant symptoms, and for hypnotic and anodyne effect is best administered in conjunction with phenacetine or acetanilid.

THE CONTAGIOUS ASPECT OF PULMONARY TUBERCULOSIS.*

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As there is so much being said and written about the contagious nature of pulmonary tuberculosis, I turned to my experience and observations for almost four decades to see if I could satisfy myself which side was tenable; I confess I was somewhat skeptical about the contagious nature of the disease before I investigated the matter and am more so now. However, my mind is open to conviction and change of opinion, whenever facts, sufficient, are presented to warrant the change.

The late Prof. J. K. Mitchell used to tell the class, that, where the consort was taken with consumption and died, the surviving partner was more likely to follow

* Read before the Medical Society of the State of Pennsylvania, 1894.

with the same disease than under any other circumstance in life. The intimate relation that existed between husband and wife, the well one was much more likely to become *infected* than under any other relation or condition. The word *contagion* was not thought of forty years ago in this connection.

I collected all the cases that I had attended, professionally, or who had come under my personal knowledge and observation and I found fifty-five such cases, when husband or wife had died of tuberculosis of the lungs with the following results to the remaining consort.

Fifteen husbands died of consumption of this number, and their wives are still living and well. Some have since remarried. One husband died about one year ago; one, three years ago, and the remaining thirteen from six to thirty years ago.

Of the above fifty-five cases, twenty-five wives died of consumption of the lungs and their husbands are alive and well now.

All these wives have been dead over six years, and some of them over thirty years.

Three husbands died of consumption and their wives lived many years thereafter, (one over thirty), and died of *old age* or some other disease.

Seven wives died of consumption and their husbands all lived to die of some other disease, and all died more than ten years after their wives.

Mr. M—— died April 17, 1870, of consumption, and his wife died of the same disease March 28, 1884. The wife following the husband fourteen years after his death from the same disease. Rather a long stage for incubation.

Mr. S—— died of consumption in the fall of 1872. Hsr husband afterwards remarried and died of the same disease in the spring of 1880—eight years later. The second wife has since remarried and is yet living and well. One case more which is peculiar.

Mr. and Mrs. B—— were married in 1871. She was not strong. He able to work, but coughing. She gave birth to twins August, 1872. The children lived a short time and both died, she never regaining her former health, but developed consumption in its rapid form and died in January, 1873. The husband died two or three years later from consumption, which had been of long standing. Mrs. B——, on her mother's side was from a consumptive family. As far as I know it did not exist in his family.

The last case is the only one in the fifty-five where there could have been any contagious influence exerted and that remains extremely doubtful. I am yet inclined to the opinion that heredity has more to do in the causation of pulmonary tuberculosis than anything else. I care not whether the germ of the disease is inherited or the productive soil, a fit and proper habitat for their implantation, development and multiplication, the fatal effects of the disease will be the same.

CORRESPONDENCE.

DR. LONGSDORF AND CHRISTIAN SCIENCE.

Mr. Editor:—In The Medical and Surgical Reporter for September 1, appears a criticism of Dr. Longsdorf's paper on "Christian Science," by Dr. J. Newton Hunsberger. While I most emphatically do not agree with the critic, yet I am glad in one sense that he wrote it and that The Reporter published it. Glad because the discussions of the papers read before the State Medical Society are never published, and these discussions, as in all medical societies, are often of as much value as the original papers. It would be of advantage many times if papers published in The Reporter, as well as in other medical journals, were taken up for "further remarks" by practitioners. It adds not only value, but interests one intensely in the subject, care being taken to remember that of all men doctors should be honest, fair and liberal.

In discussing Dr. Longsdorf's paper before the State Society, I took the ground that its valuable information would be of more importance in an educational sense to the laity, than to the profession. It is

evident, however, from Dr. H.'s criticism that some of the profession need to read it very carefully, more carefully, I am afraid, than the critic, Dr. Hunsberger has done. Had he "caught onto" the information given, and the real object of the paper, he would not have been so harsh and unkind as to call our good, womanly, gentle Dr. Longsdorf, "unjust, inhuman, selfish and cowardly." That is certainly not very professional, not to put it stronger. I can see her yet, standing timidly and modestly before the bald heads and gray beards, the middle aged conservatives and young enthusiasts that filled the old church on Walnut street, and I cannot possibly imagine any one of them yelling at her, "unjust, inhuman, selfish, cowardly," as she quietly finished. I am glad that in place of that, she received the cordial applause that she deserved.

Dr. Hunsberger accuses Dr. Longsdorf of facing both ways, in first "admitting that there were thousands of instances of authentic cures on record as a result of Christian Science," and then, "advising definite restraint" for "these abuses," and suggesting "legislative enactment." Now it happens that Dr. Longsdorf does not admit any such thing regarding "Christian Science," as above quoted. What she does say is this, "It would be out of place to argue against the possibility of *mental* cure." Then, she says, "*thousands of such instances are upon record*," etc. That is a very different statement than Dr. H. quotes, and has a very different meaning.

Prior to making the statement as to *mental* cures, Dr. L. carefully defined what "Christian Science" was by taking the definition *of its own leaders*. She clearly showed that taking *that definition*, "Christian Science" was a delusion, if not a veritable fraud. I think it is clear from her paper, that it (Christian Science) is a case of "the blind leading the blind," and both "falling into the ditch." It really looks as if our friend Dr. H. had slid in along with the rest. Dr. L says in effect the foundation is "belief," and the effect, if any, "mental," and in that way effecting the body physically. That is just the same old route by which the faith cure people, the Indian humbugged, the relic worshipers are effected. If one is *science* so are all.

Let me illustrate it from my point of view. When I was a young fellow, a patient that had been bedridden for years came into my charge. All the "old timers" in that section, had "tried, failed and given up the case." She was as a last resort turned over to the tender care and mercy of the "little doctor," as I was called. I did not know what was the matter with her. I have no doubt the "old timers" did, but they were very careful to not tell me. That woman would groan and moan for a period, and "lie awfully quiet" for another period; she had to be "hand fed" for days at a time, and was, as the head of the family put it, "the most awfullest helpless mortal critter that ever you seed." About that time clinical thermometers were coming into use and mine was a precious instrument to me. One night my patient insisted that she "was burning up," and that I must take her temperature. Taking my thermometer out of its flat case (it was one of those curved affairs fastened to a strip of wood or ivory), I approached the bed. Owing to some carelessness on my part the instrument fell to the floor and with a little bound passed under the bed. Full of anxiety for my new instrument, I grasped the lighted candle—candle seems odd at this day—and thrust it under the bed; it set fire to the "straw tick," and with a yell equal to a Comanche Indian the patient sprang to the floor and out of the room. The "cure" was permanent. Now mark the element of faith, for this old lady was no decendant of Ananias, that good woman declared most positively that it was the last dose of medicine that cured her; that she had only taken it half an hour before my arrival, and had "felt it going all through her body;" that "only for that dose she might have been seriously burnt." Mark again the element of credulity; the little doctor, at *that time*, was idiot enough to try and make himself believe that there really *was something* in her statement.

"Christian Science" (!) could have *cured* that patient.

Again, a woman had been bedridden for years; she was carried in a chair to a religious meeting of an excitable character. In the midst of the exercises the woman got up from her chair and walked across the floor. The "cure" was permanent. The result showed its perfect *naturalness*, as in the

previous case, by the fact of the patient "often giving out in the legs", until time and exercise had restored muscular tone.

"Christian Science" (!) could have cured that case. The fact in both cases being, that the patient could have walked at any time in all those years, *if they had believed that they could.*

Thousands of such cases have been "benefited," "cured," or "*changed their mind*," just as one may choose to designate it, by hundreds of different methods. None of them proof of a science evolved and made known.

If there is anything in its professions, then it applies just as well to a broken bone, a crushed limb, or an ovarian tumor as to a disease of any character that is *real.* These people are very careful to fight shy of that sort of thing, however. Did they confine themselves to cases that mental cures effect, it would not be so bad. But when they stand by the bedside of typhoid fever, diphtheria, scarletina, etc., etc., and talk about "belief," while the patient is fast hastening to the grave, denied intelligent assistance, *then* Dr. Longsdorf is right, and legislative enactment should be sought if nothing else will prevent the sacrifice.

Nor does the fact that they honestly believe in it help the case any. Nor yet does Dr. H. help the cause or his side by quoting, "If ye have faith like a grain of mustard seed ye can remove mountains," or by any appeal to the New Testament. The writer is a firm believer in the New Testament and the healing by the divine Christ, and by those whom He especially endowed. But if in these modern days the so-called Christian Scientists are to demonstrate the power "of faith like a grain of mustard seed," let them begin by feeding a few thousand of our worthy poor on "five loaves and two fishes." The lad with a basket and the needed material for beginning operations can readily be found. In this way they can do a great deal of good and no harm—that is if the theory works out right.

Again, before they begin experiments on the sick, let christian scientists ask and answer this question: "If the *mission* of Christ and His Apostles was that of healers of disease, was not that mission, as a mission, a failure?" If it was *not* the *mission* of Christ and His Apostles to cure disease, then any followers who so assume in His name, assume more than He or His Apostles did, and deceive themselves and others. All that Christ and His Apostles did in that line, was with a special object *above and beyond* the mere healing.

Dr. H. says further: "We are materialists. We look at our patients as mere machines. We forget that they are endowed with souls." Again is he much, very much mistaken. The great majority of physicians are believers in the Christian religion, even those who are not "professing Christians." The great hospitals, the wonderful research, the patient study, the anxiety, the care, the skill, the relief given by great surgeons and physicians as well as by us of the lesser ranks, to the suffering poor, without fee or reward, do not look as if our "patients were regarded as mere machines." Nor do the sacrifices of the profession for others indicate that we forget that we or they "are endowed with souls."

Again he says "we bow down and worship a lot of microbe resurrectionists, who were never in a sick room except that of dogs and guinea pigs, and have them dictate to us the quickest way to obtain a post-mortem." Let me say to Dr. H. that the above statement is not only "unjust—inhuman," but also a bad exhibition of ignorance. The class of doctors he seeks so to belittle have glorified the profession and blessed humanity.

The doctor quotes lastly, "There are more things in heaven and earth, Horatio, than are dreamed of in your philosophy." Let me kindly change it thus, "There are more things in the profession, Doctor, as well as in Dr. Longsdorf's paper than you have "caught onto."

S. S. Towler, M. D.

Marienville, Pa.

The Endoscope in Urethral Stricture.

Dr. McMunn, in a recent article in the *British Medical Journal*, calls attention to the value of the endoscopic tube as a means of aiding the introduction of the filiform bougie in extreme cases of urethral stricture. Passing the tube down through the stricture, the aperture of the stricture is widened out by the stretching of the canal over the end of the tube, or brought into view by the change in the direction of the canal, so that the filiform instrument may be easily introduced.

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SATURDAY, SEPTEMBER 22, 1894.

EDITORIAL.

A BACTERIAL STUDY OF ACUTE CEREBRAL AND CEREBRO-SPINAL LEPTO-MENINGITIS.

While the infectious nature of cerebral and cerebro-spinal lepto-meningitis has long been recognized, the character of the specific bacteria producing them has not been satisfactorily determined.

Biggs (*Wilder Quarter-Century Book*, 1893, p. 316) has recently contributed a valuable article on this subject from which important conclusions have been drawn. His studies were made on adult cases, and in the Springs of 1892 and 1893, during the eight weeks preceeding the first of May. It is during this period that vital statistics show the mortality from acute lobar pneumonia was highest (*i. e.* in the city of New York where these investigations were made); and it is to this disease that both cerebro- and spinal lepto-meningitis seems most closely allied in its etiology.

Of the eighteen cases studied by the author, six were cerebro-spinal, and twelve cerebral lepto-meningitis. In only three of the series was the disease secondary to traumatism, or to disease of the cranial bones or of the soft parts about the head. Of the cerebral cases, one was primary and eleven secondary to some local or general acute infectious process. A bacteriological examination was made in seventeen of the cases. In the twelve cases of acute cerebral lepto-meningitis the bacterial examinations gave the following results:

In one case, pure cultures of the *Anthrax bacillus.*

In one case, *Bacillus coli communis.*

In one case, *B. coli communis and Proteus Vulgaris.*

In four cases, the *Pneumo-bacillus of* Fraenkel.

In two cases, the *Streptococcus pyogenes.*

In one case, the *Diplococcus intracellularis meningitidis.*

In two cases, a mixed infection.

The finding of the localization of the *Anthrax bacilli* in the brain, is of particular interest. The patient was a wool-sorter, thirty-six years of age. He died in eighteen hours after the first symptoms of the cerebral trouble. Upon post-mortem, "the *pia mater* of the brain over both the convexity and the base was studded with hemorrhages, and the meshes of the *pia*

both in the fissures and over the convolutions were distended with sero-pus. Cultures were made from the fluid in the subcutaneous tissue from various portions of the wrist and arm (seat of inoculation), from the heart, blood, spleen, and *pial* exudate on both sides of the brain. In all of the tubes inoculated from the brain, a pure culture of the *Anthrax bacillus* developed. All of the other tubes remained sterile. The media employed and the conditions under which the cultures were made and kept after inoculation, were the same. The identity of the *Anthrax bacillus* was established by microscopical examination, by culture reaction and by inoculation of animals." Cover-glass preparations from the various organs also failed to reveal the presence of the bacilli, excepting in those from the brain.

The appearance of *Bacillus coli communis* in pure culture in the brain, is also interesting as it furnishes another evidence of the distribution of that organism in the body. It is believed by the author that this bacillus was the exciting cause of the meningitis, as it appeared in pure culture and followed after typhoid fever. The explanation being the migration of the colon bacteria through the intestinal ulcers into the blood or lymph channels, and eventually lodging in the meninges, where they set up an acute inflammation.

The *Pneumo-bacillus* of Fraenkel was found in four cases where the meningitis followed lobar pneumonia. The presence of this bacillus in acute meningitis has been known for some time, and certain writers have been led to the opinion that this bacillus is nearly always the etiological factor in this disease. The results of the author show, however, that other agencies are quite abundant.

An observation of much interest is added by the writer, that he has rarely seen cases of cerebro-spinal meningitis at any other season of the year than during the spring months, and these cases are almost invariably primary and develop suddenly without any ascertainable cause.

The following important statements are made by the author:

1. "Purulent or sero-purulent meningitis is always microbic in its origin.

2. "Many cases of cerebro-spinal meningitis do not differ from cerebral meningitis except in the extent of *pia* affected. The etiological factor may be the same.

3. "Cerebro-spinal meningitis is usually primary.

4. "Cerebral meningitis is usually secondary to some infectious disease and is only occasionally primary.

5. "When the disease is secondary, the cause of the secondary infection may be a different organism from that producing the primary disease.

6. "The following organisms have been previously found in the *pial* exudate in cerebral meningitis: The *Pneumo-bacillus* of Fraenkel, the *Streptococcus pyogenes*, *Bacillus Typhosus*, *Staphylococcus pyogenes*, *Pneumo-bacillus* of Friedlander, the bacillus of '*La Grippe*' and the *Gonococcus*." The authors' observations have added two new ones, *Bacillus Anthracis* and *Bacillus coli communis*.

7. "The *Pneumo-bacillus* of Fraenkel is the most frequent cause of cerebral meningitis.

8. "The latter organism is not infrequent cause of primary cerebral and cerebro-spinal meningitis, the lungs not being involved.

9. "The cases of meningitis due to different organisms do not show such constant differences from each other in the symptoms presented, as to make possible the clinical differentiation as to cause.

10. "The amount of exudation bears no constant relation to the severity of the symptoms.

11. "It is not possible to distinguish with certainty during life, cases of acute cerebral hyperæmia, with or without œdema, from cases of meningitis."

ABSTRACTS.

REVIVAL OF SYMPHYSEOTOMY.

The literature of this subject has in recent years become so voluminous that it would be impossible to find space to do more than summarize the accounts of the most striking work done in Italy, France and Germany, where the operation has been most frequently performed, and has found the most prominent supporters.

Historical.—The operation was first proposed by Sigault, of Dijon, in 1768, and first performed at Naples by Domenico Ferrara in 1774. Ever since then there have been champions of the operation in Naples,* notably Amantea and Galbiati, and in more recent times Spinelli, Caruso and Morisani. The last of these called attention to his operative work for the first time in 1863, and his contribution of facts and opinions on symphyseotomy was perhaps the most remarkable feature of the Gynecological Section's Proceedings at the recent Congress at Rome. Throughout the rest of Europe the operation was entirely abandoned as too dangerous. This result was largely owing to the discussion which took place between Sigault and Baudelocque. In this discussion Baudelocque appeared to bring forward unanswerable arguments drawn from his experiments upon the cadaver, especially proving the absence of increase in the conjugata vera and the occurrence of fraction of the sacro-iliac joints as results of the operation; and though his conclusions were shown later to be erroneous, they were accepted at the time. It was not until great advances had been made towards exact pelvimetry, and antiseptics had been introduced into obstetric surgery, that the results obtained by the Italians were sufficiently encouraging to attract favorable attention in France and Germany, and, curiously enough, it was at the Clinique Baudelocque in Paris, that the most strenuous advocates of symphyseotomy were found.

Symphyseotomy in Germany. — The transactions of the German Gynecological Society at its meeting at Breslau in May, 1893, will perhaps best serve as the basis of a review of the German material up to that date.

Zweifel, of Leipzig, gave an account of his experience, referring to previous papers of his own and of others on the same subject, and frankly admitting that his opinion on the subject had undergone a complete change. He mentioned fourteen cases of symphyseotomy occurring in his clinic. All the fourteen women recovered completely, without any unfitness for exertion. Two of the children were stillborn, or died immediately after birth. He found it impracticable to follow the example of the Neapolitan school, and wait for spontaneous delivery after the cutting portion of the operation. He had to apply the forceps in ten of the cases, but always with the head low in the pelvis. The weakening of the fœtal heart-sounds was in every case the indication for the use of the forceps; and in six of the cases coiling of the cord round the neck of the fœtus was found to be the explanation of the indications.

As to the *technique* of the operation, Zweifel calls attention to the following details. The incision through the skin gives rise to smart hemorrhage, which can be readily stopped. The introduction of the finger behind the symphysis and the protection of the knife in cutting through the cartilage from above downwards are easily effected. Only in one case had he to use the chain-saw, owing to difficulty in completing the incision through the symphisis. Difficulties may arise here, not from ossification, but from obliquity in the direction of the symphisis or irregularity in the form of the pubic bones. When the cartilage is cut through the pubic bones separate about a quarter of an inch, and when the last fibres of the ligamentum arcuatum give way, the distance between the bones amounts to a finger's breadth. Then comes on very considerable hemorrhage, which is very difficult to stop. It is best arrested by the introduction of a tampon with counter-pressure from the vagina. When this has been done the patient may be put back to bed and labor allowed to proceed

* Corradi. "History of Obstetrics in Italy during the 18th century."

for twelve or fourteen hours. In many cases the os is not fully dilated, although the membranes may have ruptured at the time of the incision. When the head is passing through the narrow portion of the pelvis the pubic bones sometimes separate to the extent of 2½ to 2¾ inches. In such cases there is always fresh hemorrhage and the need for additional *tamponnade* to arrest it.

After the completion of parturition, another set of circumstances demand attention. Zweifel says that the old accouchers used to fix a cerviette round the pelvis, and healing took place. He himself had to resort to suture of the bones in eleven cases. He describes the difficulties in the way. He used silver wire and it cut through; he separated the periosteum with a raspatory, and took a larger hold of the bone; and he finally succeeded in bringing the separated surfaces of the symphysis together. He says this proceeding is not difficult, but recommends that it should not be attempted in private practice. It may be sufficient to follow the Italian method of suturing the fascia, and so turning in the feet when the legs are extended as to diminish dragging upon the symphysis. In order to keep the pelvis still and immovable, a special girdle was used at first, but in later cases strips of plaster fixed round the pelvis were found to be as efficient and more comfortable. In three cases in which silver wire was used incontinence of urine came on, and required treatment later. In Sweifel's cases the ability to walk soon returned. There was a slight increase in every case in the transverse diameter of the pelvis.

The puerperium was favorable throughout in only three of the cases, and five of the number were ill, with high temperature, for a long time.

Attention is called to the extensive lacerations of the maternal soft parts, which may be as serious as the injuries to the sacro-iliac joint. Such lacerations occurred in Zweifel's cases once spontaneously, and three times during forceps delivery. Three of the women were primiparæ. Later experience has led many operators to the conclusion that symphyseotomy should not be performed upon any woman during her first labour.

At the same congress Döderlein, also of Leipsig, described and illustrated his observations on certain questions bearing on the operation. He set himself, first, to answer the question, What is the condition of the sacro-iliac synchondrosis when the pubic bones are separated during the operation? The second question to be answered was, Is the amount of room in the pelvis gained by the operation a sufficient advantage to place against the dangers and difficulties of the operation? On the first head he found, contrary to the accepted traditional views of Baudelocque, that in the pregnant woman at full term the sacro-iliac joint does not fracture; there is only a partial tearing of the capsule of the joint and especially of the anterior sacro-iliac. ligament. "The joint is opened and the fluid in the joint escapes; if small vessels are torn there may even be an extravazation of blood into the joint. As soon, however, as the pelvis is restored to its proper shape on the completion of labour the injuries are quickly and completely healed if no infection has occurred." On the question of increased space in the pelvis Döderlein proved by experiment that when the pubic bones were separated six centimetres there was an increase in the inlet equivalent to 50 square centimetres, and when the symphysis was separated eight centimetres there was an increased area of the inlet equivalent to 66 square centimetres.

Leopold, of Dresden, had performed the operation four times. He thought it was not an operation for general practice, and was not likely to become so. The upper limit for the conjugata vera is 8cm. (3⅛in.,) and the lower limit 6cm. (2⅜in.) Labour should be allowed to proceed until the os is completely dilated, and then the whole process should be completed at once by the application of the forceps. The greatest possible care must be exercised to prevent laceration of the vagina. Primiparæ should never be subjected to the operation.

The discussion was continued by Chrobak and Schauta, of Vienna; Olshausen, of Berlin; Fehling, of Basel; and others who had done the operation very seldom or not at all. It brought out differences of opinion on various points, such as the relative danger of injuries to the bones and to the soft parts, the need for suture of the bony parts (Knochen-nacht), the relative frequency of pyrexia and symptoms of sepsis after operation, and to what extent symphyseotomy would do away

with the necessity for perforation of the living fœtus.

Such was the state of information and opinion among German obstetricians little more than a year ago.

In the discussion on symphyseotomy, which took place at the International Medical Congress in March last, Leopold and Zweifel among others took part, and the former said that it was his duty to explain the position in the controversy occupied by German obstetricians. He and his colleague, however, brought out the fact that they had not in any way changed their views on controverted points. Leopold still spoke in favor of premature labour practised not earlier than the 34th week, and Zweifel advocated, as formerly, delay after the cutting portion of the operation, so as to avoid the application of the forceps. His cases had now increased to 23, all the mothers were alive, and 21 of the children. There had been no incontinence of urine, no fistula, no serious puerperal affection, but in three of the women walking continued for a long time to be difficult.

Sänger, of Leipzig, joined in the discussion to compare the operation with Cæsarean section. He said his mortality for 12 cases was nil. In general the mortality of the two operations differs little. If we compare the time occupied by the two operations, we find that Cæsarean section takes about an hour, and requires no after treatment, whereas symphyseotomy, according to Zweifel's method, demands about a day, and the after treatment continues for about a year. Symphyseotomy in Sänger's opinion ought to be more limited in its scope, and that of the Cæsarean operation extended.

Symphyseotomy in France.—The revival of symphyseotomy in France chiefly depends upon the clinical work of Pinard. This clinical work is explained and justified by the anatomical and experimental studies of Professor Farabeuf* and of Dr. Varnier.

Up to the time of delivering his address on symphyseotomy at Rome in March last Pinard had performed the operation 36 times, with the result that two mothers and four children died. No accident had occurred in any case during the incision of the symphysis and enlargement of the pelvis. Hemorrhage had always been stopped by using a sponge as tampon. During the extraction of the fœtus in primiparæ laceration of the anterior vaginal wall occurred five times. The tears were not extensive, and gave rise to little trouble. The practice of preliminary dilatation by means of Champetier's bag rendered laceration a rare occurrence. Incontinence of urine continued for a considerable time in one case. In all the cases consolidation of pelvis was complete by about the twentieth day. The after-history, in a considerable number of the cases, showed that the women were engaged at laborious occupations, and did not suffer in any way. One of the women became pregnant about three months after undergoing the operation, and went through normal spontaneous parturition at full term in the *clinique*.

Pinard gives a table showing a comparison between the results obtained in cases of contracted pelvis by the induction of premature labour and by symphyseotmy. In sixty-four cases of the former two mothers and thirty children were lost, whereas in thirty-six of the latter two mothers and four children were lost. The author proceeds to give a *résumé* of the anatomical and experimental researches of Farnbeuf. He begins with the remark, "Ces notions anatomiques sont ennuyeuses." With this opinion most readers will agree. The summary itself is long, and incapable of further condensation. Pinard then gives a carefully detailed illustrated account of his method of operating. He "indicates the method by which the difficulties and dangers of the operative proceedings are to be suppressed."

He finally formulates his conclusions as follows:

1. Symphyseotomy or pubiotomy performed antiseptically is not a dangerous operation.

2. In order to be useful it ought to be complete, and the preliminary separation of the pubic bones ought to be in proportion to the contraction of the pelvis.

3. The operation should be performed only on those cases in which examination and measurement of the pelvis show that separation of the pubic bones to the extent of 2¾ inches will permit the passage of the fœtal head at term.

* "Possibilite et moyens de traiter scientifiquement la dystocie du detroit superieur retreci."—*Annales de Gynecologie*, May-June, 1894.

4. Separation of the pubic bones exceeding 2¾ inches, being capable of producing lesions of the soft parts, should be proscribed.

5. When the contraction of the pelvis is such that separation of the pubic bones to the extent of 2¾ inches will not permit of the passage of the head of the fœtus, recourse should be had to Cæsarean section (Porro's operation.)

6. In case of oblique ovular pelvis, with synostosis of one of the sacro-iliac articulations, when the contraction does not permit of spontaneous delivery, it is best to perform the operation of Farabeuf, that is, ischio-pubiotomy.

He adds the following "general conclusions":

1. Embryotomy, cephalotripsy, and waiting for the death of the fœtus ought to be forever proscribed.

2. Operative enlargement of the pelvis, conducted according to the rules laid down, ought to lead to the abandonment of (*a*) the induction of premature labor; and (*b*) every operative proceeding having for its object to make the fœtal head struggle against osseous resistance which cannot be overcome by the uterine contractions.

Symphyseotomy in Italy.—The work of the German and French obstetricians in symphyseotomy is a mere reflection of that done in Italy, and more especially of the work of Morisani, of Naples. Morisani's first publication, "On the contraction of the pelvis and the indications which appear at the time of parturition," attracted considerable attention to symphyseotomy. It appeared in 1863, and since then numerous papers have conveyed to the medical profession a knowledge of his clinical work and of his opinions. He has also been aided in his advocacy by able colleagues and disciples, who have been active clinical workers and diligent contributors to the literature of the subject. One of the most useful of these contributions was that of Spinelli, "Sulla Sinfisiotomia, annotazioni storiche, critiche e bibliografiche," which ran through several numbers of the *Annali di Ostetricia e Ginecologia* in 1892. Among the numerous addresses and papers of Morisani, one of the most important was a contribution to the same journal in January, 1893, "Per la Sinfisiotomia," in which he gave the statistics and details of fifty-five cases. And now quite recently, at the International Congress, his address on symphyseotomy placed before the profession his most mature experience and reflections.

Symphyseotomy is now rendered a justifiable operation by our clinical experience. We are enabled by it to extract a well-developed child at term through a contracted pelvis with a conjugate diameter of 6-7 cm. to 8-8 cm. (2⅜in. to 3½in.) The operation is contra-indicated when the fœtus is dead, or even very feeble. The time for operation is when the pains are in full force and the dilatation of the os is well advanced. If it be objected that with an antero-posterior diameter of 3⅜ in. spontaneous birth is possible, or the forceps may readily complete the parturition, it may be answered that a favorable termination is only exceptional, and that the use of the forceps in such circumstances is "masked cephalotripsy," with this difference, that the ordinary cephalotribe would produce less grave and dangerous injuries to the maternal parts. This conviction, however, should not lead to rash action; in every doubtful case plenty of time should be allowed to the natural forces, and the forceps even may be cautiously tried before resorting to symphyseotomy.

In the employment of version in cases of modern contraction, Morisani has no confidence. The mortality among the children is enormous; Zweifel puts it at 29 per cent.

Two or three combinations of other operations with symphyseotomy are discussed: The combination with induction of premature labour is rejected; the combination with embryotomy in certain rare cases is considered advantageous.

The operative details are easy of execution, and do not involve any danger to the patient worth mentioning. The curved bistoury of Galbiati is not essential. Any knife with a protected point and a narrow, strong blade will do. Morisani has never met with ossification of the symphysis, but admits that a chain saw may be required when there is great obliquity and irregularity of the symphysis. It is essential that the accoucher ascertain that the subpubic ligament is completely divided, and that all the structures of the joint are so cut as not to interfere with the separation of the surfaces. When the thighs are abducted, the separation should extend at once to 4 or 5 cm., and in some

cases even to 6 or 7 cm. As soon as this preparation has taken place Morisani applies the forceps and completes the labour. He justifies this course as against Zweifel's advocacy of delay. When the labour is over the wound is at once closed with silk sutures, which are applied as both deep and superficial. Osseous suture is shown by Morisani's statistics to be unnecessary. He has also given up special appliances for holding the pelvis immoveable. Simple bandaging and tying the knees together suffice for obtaining a perfect cure.

Hemorrhage has never been a troublesome feature in Morisani's operation. *Tamponnement* of the wound has always been sufficient to arrest it. The lacerations of the anterior vaginal wall, spoken of by some, have figured little in the practice of the operators at Naples. They might be altogether avoided if primparæ were not operated on, and if the innominate bones were pushed together towards the end of the extraction so as to support the soft parts.

In comparing symphyseotomy with other operations, Morisani thinks that it does not come into competition with Cæsarean section, inasmuch as one begins where the other leaves off. With a conjugate diameter of less than 6.7 cm., the Cæsarean operation "conserves its rights." He deprecates the resort to abdominal section, with its mortality of 12 per cent. in cases where symphyseotomy should give a favorable result.

As to craniotomy on the living child, the maternal mortality is appreciable, and the balance of advantage lies with symphyseotomy. As to the advantages of induction of premature labour, Morisani has changed his mind. If the deformity of the pelvis be such as to require for the birth of a living child induction at the end of the seventh month, or in the course of the eighth, then symphyseotomy should be resorted to. The results of induction so early are "deplorable." "The great majority of the children die," in spite of all the appliances to keep them alive.

The statistics of symphyseotomy appear to require careful handling. The number of cases collected from various sources is 241, showing a maternal mortality of 11.6 per cent. Some of the deaths were due to causes unconnected with the operation. The result of the 241 operations, as far as the fœtus was concerned, was 186 living children and 55 deaths. Of these deaths it is sought to explain away 25.

Morisani's own results, as published in January, 1893, in the paper already referred to, show 55 cases in the five years from March, 1887, with two mothers and five children lost, a very remarkable maternal mortality for such an operation.

Morisani's final summary does not contain any fresh point, except, perhaps, his insistence upon the disastrous results of operating upon women with pelves contracted beyond the minimum of 6.7 cm. of conjugate diameter.—Sinclair, in *Med. Chronicle*.

Scarlet Fever from Milk.

Dr. Chalmers, of Glasgow, recently reported an outbreak of scarlet fever which was traced to a dairy, one of the milk boys of which had suffered from the disease. It was not proven that the cows had suffered any malady to which scarlet fever could be traced.

Management of the Intestine After Abdominal Section.

Drs. Skene Keith and George E Keith (*New York Journal of Gynecology and Obstetrics*) say:

When the general condition of the patient is fairly good and the abdomen is not distending, and when there is not much colic, let things take their natural course. This advice holds for the great majority of cases.

When the abdomen is distending without a previous state of peristaltic action shown by much colic, and when there is a tendency to vomiting, give the mixture of magnesia until the bowels move.

Treat distention without colic or vomiting by the quinine injections.

Quiet excessive peristaltic action by small doses of morphine given hypodermatically.

For distention following excessive peristalsis give a small dose of morphine followed in a few hours by castor oil or magnesia.

When there is septicæmia, wash out the abdomen as soon as the condition is evident and treat as above.

Do not get into the habit of calling septicæmia shock, exhaustion, or any such term. Be content to believe that some mistake has been make in the antiseptic precautions and that additional care must be taken in future.

CURRENT LITERATURE REVIEWED.

IN CHARGE OF ELLISTON J. MORRIS, M. D., AND SAMUEL M. WILSON, M. D.

ARCHIVES OF PEDIATRICS,

for August. Dr. F. Huber discusses

Congenital Constipation.

He comments upon the slight importance parents give to constipation in infants. When they pay any attention to the subject they give any remedy that they think suited to the case. In addition to the well-known causes—improper feeding, poor quality of milk, faulty intestinal innervation, etc., the author thinks the peculiar arrangement of the colon a direct and rarely recognized cause. The length of the large intestine is comparatively greater in young children than in older ones or in adults, and to accommodate this it must fold back, sometimes several times, on itself, thereby effectually preventing the passage of feces.

When this condition exists and leads to obstruction, the child becomes quite ill, suffers pain, has a terse abdomen, and careful examination is necessary to diagnose properly.

To relieve the condition it is best to use a copious injection, gently administered by a fountain syringe elevated a very little, but it is often necessary to introduce the pipe some distance into the bowel. It may be found necessary to raise the bag to some height, and also to use calomel, oatmeal water, etc. In any case it is necessary to continue the high rectal injections for some time, and to keep the case under constant observation for years.

In the discussion which followed, one of the members taking part seemed to advocate the use of ox-gall. sweet oil, or turpentine, but had not used these remedies continuously in cases.

Dr. Chayles W. Townsend writes of

Hæmorrhagic Diseases of the Newborn,

The author thinks his experience proves the existence of a contagious disease, not dependent in any way on puerperal septicæmia, and causing in infants, usually of two or three days of age, (almost always under seven) hemorrhages from mucous surfaces. This disease he thinks quite distinct from hemophilia, self limited, and when leading to umbilical hemorrhage, invariably leading also to hemorrhage elsewhere.

He proposes a supportive treatment, bathing, etc., and frequently finds it necessary to feed breast milk from a spoon instead of depending on the baby nursing.

In collapse external heat and alcoholic stimulants are useful. Astringents and mineral acids seem worthless.

Dr. John Lovett Morse reports

Five Cases of Gonorrhœa in Little Girls.

These children ranged in age from two years to five and three-quarters. The symptoms were inflammation of the external genitals, more or less discharge, usually painful micturition. Each case showed the presence of gonococci, and no non-specific cases were met with by the author; so that he concludes that valvo-vaginitis in children of this age is usually specific. There was no suspicion of rape in any case, and no satisfactory cause could be assigned except the probable use of bath tubs and towels in common with infected adults.

Dr. B. K. Rachford discusses "The Influence of Venous Congestion on Spinal Reflex Centres." Dr. Francis Huber reports a case of "Congenital Hypertrophy of the Fingers." Dr. Henry Dwight Chapin writes about the "Symptoms of Intestinal Obstruction Without Stenosis." Dr. Irving M. Snow reports a case of "Purpura Hemorrhagica Complicating Lobar Pneumonia." Dr. Charles A. Leale describes a rare case of Tuberculosis and Sarcoma.

ARCHIVES OF PEDIATRICS.

Dr. J. Henry Fruitwright continues his article on

Infantile Scurvy.

The case of a boy nine years old is described; he had lived for some time on salt meat, dry rye bread and black coffee, and complained of what his mother called "growing pains." This boy had oval swellings about the knee, very sensitive to pressure, ecchymoses on the chest and elsewhere, foul breath, alternate constipation and diarrhœa, and began improving as soon as given antiscorbutic diet and treatment.

The author describes the treatment of the disease as follows: The joints of the lower extremity take on an unnatural immobility, resembling a pseudo paralysis, and accompanied by tumefaction and exquisite pain on pressure.

The radius may be affected, but the most characteristic bone symptoms are the cylindrical swelling of the lower ends of the femur and tibia. The skin covering the swellings is tense, shiny, pale, without local heat, and will not pit on pressure. There is great liability to fracture of the bones near the epiphyses. Fever is not constant. In neglected cases profound anæmia supervenes, subdermal ecchymoses form, and ulceration may result; also epistaxis, enterrhagia, hæmaturia, etc. "Hemorrhages are most common where epiphyseal growth is active," and may occur under the periosteum anywhere, leaving a cast to be found post-mortem.

Scurvy is most commonly mistaken for acute rheumatism, but differs from it in the shape of the swellings. In scurvy these are cylindrical or fusiform, and in rheumatism they are more apt to be lateral or circumferential, with local rise of temperature, and

with local points of tenderness on pressure. In scurvy the swelling is uniformly tender, and white and tense.

Rheumatic purpura might complicate the diagnosis, and if mouth symptoms be absent the therapeutic test might have to be relied on.

It may be necessary to rely on the therapeutic test in cases simulating Pott's disease, etc., but in cases of long standing the symptoms of scurvy should be too well marked to make this at all needful.

Two varieties of purpura somewhat resemble scurvy. In peliosis rheumatica the peculiar joint symptoms of scurvy do not precede the eruption, although pain is a prominent symptom in it.

Purpura hæmorrhagica simplex was once thought identical with scurvy, but the diagnosis lies in the absence of pain around the joints.

In treating scurvy the author relies almost wholly on the diet, excludes all artificial foods, and gives sterilized or pasteurized cows' milk, and, if the child be old enough, fresh scraped beef and baked or mashed potato The juices of the orange, lemon, lime, and apple are very useful. Iron, or the citrate of iron and ammonia are useful to combat the effects of this disease, ergot may be necessary if there be much hemorrhage from the mucous membranes, and other remedies may be required if individual symptoms are marked.

BRITISH JOURNAL OF DERMATOLOGY FOR AUGUST.

Dr. Alfred G. Francis writes of

Elephantiasis Associated With Tertiany Syphilis.

Cases are reported at some length. In one case where, as in the others, the history and scars of syphilis were easily found lymphatic abscesses and then lymphorrhagia occurred a few weeks before death.

In the majority of cases the disease is limited to one limb, and this has usually been the seat of syphilitic ulcers, etc. The enlargement is much less marked than in cases of filarial origin or lymphoid disease, and at intervals becomes the seat of inflammation limited to the affected part, leaving it larger than before. These attacks of inflammation are called elephantoid fever.

The resemblance which these cases bear to the milder varieties of tropical elephantiasis leads to the suggestion that these also are caused by lymphatic obstruction. Although there were no other symptoms it is probable that in the case of lymphorrhagia referred to the abscesses had pierced some varicose lymphatics. No nerve lesion was found in any case so that a trophoneurosis is excluded from consideration.

Syphilis causes elephantiasis frequently, and that when confined to the genitals the enlargement is not entirely due to gonorrhœal secretions is proved by its appearing in males, where the discharge can be proved absent. The author regards the well known connective tissue hypertrophies of internal organs an analogous affection.

Dr. Stephen Mackenzie reported a case where a "papulo tubercular, squamous, and crustaceous syphilide" was partly distributed along a nerve, resembling in this herpes zoster.

THE ANNALS OF GYNÆCOLOGY AND PÆDIATRY

for August. Dr. Henry Parker Newman contributes a paper on

Shortening the Round Ligaments for Uterine Displacements,

giving the results of six years experience with the procedure. The author meets the objections usually urged against the operation, namely, the difficulty of finding the round ligaments, the possibility of breaking them and their absence. His answer to the first is that by his method of cutting down on the inguinal canal directly over the internal ring it is always possible to find the ligament and the danger of breaking it is much less than by the old method of searching with for it among its divergent filaments. He denies that the liagments are ever absent and also asserts that from experiments on the cadaver he is convinced that they will stand a much greater weight than is likely to be imposed on them by the uterus. His method of operating is as follows: An incision is made an inch and a half or more in length, parallel with Poupart's ligament, directly over the canal of Nuck, which is midway between the spine of the pubis and the anterior superior spinous process of the ilium. This initial step exposes the glistening aponeurosis of the transversalis muscle. Through a single nick in the course of the separated fibres of an aponeurosis the blunt hook may now be passed into the canal and the round ligament, which will be seen as a whitish, slightly flattened, cork-like structure, pulled out. Where the operator is not confident of his ground the author suggests the lengthening of the incision to confirm the identity of the ligament. Or an assistant can draw the uterus backward by a sound or finger, when the tension on the ligament will be seen and felt in the wound. After the ligament on one side is secured the opposite side is also found and the both ligaments are drawn upon, exposing in the canal of Nuck a reflection of the peritoneum surrounding the ligaments like a glove finger. This should be stripped back until the ligament can be drawn well out and the uterus sharply anterverted. This gives a loop of ligament on either side, about four inches in length, to be disposed of by stitching the proximal ends together, and anchoring them firmly to the aponeurosis and walls of the canal by buried sutures, care being exercised to avoid strangulation or disturbance of its nutrition. The wound is closed with one series of silk-worm sutures made to include the walls of the canal, the aponeurosis of the external oblique, and the superficial coverings. Patients are kept in bed three

weeks or more. until firm union of the incised structures has taken place, and precautions against over-exertion or straining of the parts are insisted upon for as many months. Hernia is guarded against by the deep sutures constricting the canal about the internal ring, insuring firm union where most needed. Appended to the paper is the report of a number of cases.

Dr. E. E. Montgomery discusses

Vaginal Hysterectomy,

giving as the indications for the operation the presence of malignant disease, the presence of a number of fibroids in the uterine walls where the hemorrhage is so great as to endanger life, and also procidentia uteri accompanied with ulceration of the vaginal surfaces. He suggests that in the after-treatment, so soon as the patient recovers from the shock of the operation, the upper part of her body be elevated slightly, in order that drainage be favored. The author favors the use of the clamp in preference to the ligature for securing the broad ligaments. "The advantages of the use of the clamp over the ligature have seemed to be the greater rapidity with which the operation can be performed; second, the greater security against hemorrhage; third, the more effective drainage, due to the pressure of the clamp upon the perineum and vagina; fourth, the absence of any foreign body to delay union as a result of infection. After a careful study of the cases which have come under his observation, the writer fails to see wherein there are any contraindications to the use of the clamp that are not more than compensated by the advantages already cited."

Dr. George Tucker Harrison discusses

Hæmatocele Retro-uterina.

The author thinks that the term hæmatocele or, more specifically in its typical form, hæmatocele retro uterina, should be limited to an effusion of blood into Douglas's space, previously shut off from the general peritoneal cavity by pseudo membranes, the result of a previous pelvio-peritonitis, forming a tense tumor which displaces the uterus forward. It should be carefully discriminated from a free effusion of blood into the peritoneal cavity, on the one hand, and an effusion of blood into the connective tissue of the pelvis, constituting an hæmatoma, on the other."

In regard to treatment, he states that he is unable to see the advantage accruing from laparotomy, as the operation adds to the dangers and a necessary accompaniment is drainage through the bottom of Douglas's pouch. He rather would make broad transverse incision at the deepest place of the posterior fornix vaginæ, and then, by blunt scissors, clear the way to the sac. If there is a plain sac-wall, it is sutured above and below to the walls of the vagina. The blood coagula are now removed by the fingers without the use of force. If there is any bleeding, the use of iodoform gauze is indicated. If not, a rubber drainage tube, with the addition of careful irrigation is in place.

Dr. Walter A. Crow contributes a short paper on

Cancer of the Uterus.

Considering the remote results of operative interference, the author quotes the opinions of various authorities and reports a number of successful cases—successful so far as recovery from the operation is concerned but in some instances the disease returned and in others the time since operation is to short to make the cases of any value. He takes the view that cancer in the beginning, as a disease, is purely local and urges on the profession the need of early diagnosis and operative interference.

The remaining papers in this issue are: "Ultimate Results in the Treatment of Backward Displacements of the Uterus," by Pessary, with Especial Reference to the Alexander-Adams Operation, by F. H. Davenport, M. D., published in *The Ameaican Journal of Obstetrics* for July, and reviewed in THE MEDICAL AND SURGICAL REPORTER for September 1st, page 309. "Rupture of the Uterus; Palliative versus Surgical Treatment," by Charles M. Green, M. D., published by *The American Journal of Obstetrics* for July and review in THE MEDICAL AND SURGICAL REPORTER for September 1st, page 308. "Inflammation of the Ureters in the Female," by Mathew D. Mann, M. D., published in *The American Journal of the Medical Scienees* for August, and reviewed in THE MEDICAL AND SURGICAL REPORTER for September 8th, page 341.

THE AMERICAN JOURNAL OF THE MEDICAL SCIENCES

for September.

Two papers appear in this issue on the subject of Leprosy. The first is by Dr. James Nevins Hyde entitled

The Distribution of Leprosy in North America.

The author does not include syringomyelia, Morvan's disease, scleroderma, morphœa, Raynaud's disease, or ainhum as among the manifestations of leprosy, as he thinks there is not yet sufficient evidence to establish these as forms of the malady. He is also of the opinion that the tubercular, anæsthetic, macular, mutilating, and mixed forms of lepra should figure no longer in the statistics of the disease. They are not varieties, but different external expressions of one and the same malady, often simultaneously shown in the same patient. From the data at his command he computes that there are ninety-two lepers now alive in this country. "There are actually two lepers in Florida; and usually from one to three in Illinois, and the same number in New York. One is known to be in Texas, two in Idaho, two in Pennsylvania, four in South Carolina. There are probably more than threescore of lepers in Louisiana, and less than half that number in the States of the Northwest. This suggests an approximate estimate of between one hundred and two hundred cases of lepro y. Competent

observers have estimated that the total number is between ninety and one hundred and fifty. It can scarcely be doubted that in each of the last fifteen years there have rarely been fewer than one hundred lepers living within the territorial borders of our country." The author cites an instance of a leper twice making the journey from Chicago to Sweeden and finally dying in Chicago.

"These figures," he says, "are not to be reviewed either with the hysterical alarm of the timid or with the careless indifference of the unwary. They call for intelligent discussion and for a wise provision, alike for the need of the unfortunate leper and for the safety of the community in which the infected are now living. There are greater problems presented to the physicians of America than those growing out of these interesting statistics. Tuberculosis alone exposes at present, to a greater danger than lepra, the health of our population. But enough lepers are now sheltered upon this soil to offer a menace to the welfare of its inhabitants and to propose a problem in State and sanitary scientific which I believe the General Government alone can rightly solve."

The second paper on the subject is

The Diagnostic Features and Treatment of Leprosy

By Dr. Prince A. Morrow. The author summarizes his conclusions as follows:

1. From the standpoint of scientific therapusis, a clear conception of the pathogenesis and pathological anatomy of leprosy is an essential condition in formulating the principals of rational treatment.

2. It is now generally conceded that Hansen's bacillus is the active, efficient cause of leprosy, and that the presence of the bacilli in the tissues sets up either directly, or indirectly through their toxines, the vast array of organic changes and functional disorders peculiar to the disease.

3. There is no substance known to science which, introduced into the body, is capable of destroying the bacilli without destroying the living cells which contain them.

4. Furthermore, from the nature of the pathological changes and the position of the bacilli in the deeper tissues, it is evident that no germicidal agent can be brought into direct contact with the pathogenetic organisms, and hence all treatment which has for its object the destruction of the bacilli is impossible of application.

5. The treatment of leprosy by injections of tuberculin has been disappointing in its results. Experiment has shown that the action of tuberculin is positively pernicious in setting free the bacilli in the tissues and determining the development of new foci of the disease.

6. The treatment of leprosy is essentially empyrical; whether, as has been claimed, certain remedies act by virtue of sterilizing properties upon the living tissues, rendering them unsuitable to the growth and multiplication of the bacilli, cannot be determined.

7. The more or less rapid development of leprosy depends upon the resistance of the tissues to the inroads of the bacilli. In exceptional but well authenticated cases, this capacity of resistance is sufficient to dominate and destroy the pathogenetic microbes, as shown by the observation of abortive cases in which indubitable signs of the disease definitely disappear and never recur.

8. This capacity of resistance may be strengthened by change of climate, improved habits of living, and measures calculated to build up and maintain the general health at the highest standard.

9. Observation shows that the removal of a leper from an infected district to a more favored climate exerts a marked modification on the course of the disease; there is, for a time, at least, an arrest or retrogression of the symptoms. This lull in the manifestations is, as a rule, disappointing in its duration. Of the one hundred and sixty Norwegian lepers who have emigrated to this country, there is no record of a single definite cure.

10. A dry, moderately cool, mountain atmosphere is most favorable in its influence upon the disease. A hot moist climate, or a damp cold climate are both unfavorable.

11. A nutritious diet of fresh meat and vegetables, warm clothing, exercise in the open air, freedom from exposure to damp and cold, are important elements in the hygienic course of treatment.

12. The care of the skin by frequent hot baths, massage, with inunctions of oils, etc, should receive as much attention as the constitutional treatment.

13. The special remedies which clinical experience would indicate to be of the most value, are chaulmoogra oil, gurjun oil, arsenic, and certain agents of the strychnos family; all are, however, more or less disappointing in their results.

14. All observers agree that in advanced cases, where general dissemination of the bacilli has taken place, curative treatment is absolutely futile. The most favorable conditions are that treatment be instituted early, and that it be prosecuted actively and energetically during a prolonged period.

15. The surgical treatment of leprous sores, necrosed bones, perforating ulcers, the excision of tuberoles, amputation of the members, tracheotomy, various delicate operations about the eyes, nerve-stretching for the relief of pain, the removal of threatening complications, are of the most signal benefit.

16. Finally, we may conclude that while medical science holds out no definite promise of cure to the leper, its resources are sufficient to arrest or retard the progress of his disease, to promote his comfort, and to prolong his life.

The paper by Drs. William E. Hughes and William S. Carter entitled

A Clinical and Experimental Study of Uraemia

Is concluded in this issue. As the result of the numerous experiments the authors have come to the following conclusions:

1. Uræmia is an intoxication by a poison circulating in the blood.

2. This poison is present in serous effusions as well as in the blood.

3. It is probable that in addition to the dathogenic poison of uræmia there are, under certain conditions, other secondary ones active in its production.

4. The poison producing uræmia will also produce nephritis and a fatty degeneration of the retina, and cause of the eye symptoms in Bright's disease.

5. This poison is probably some albuminous substance. It is effected by heat and is only with difficulty dialyzable.

6. In is probable, but not certain, that this poison is not constantly circulating in the blood, but that under exceptional conditions it becomes developed.

7. It is possible to have uræmia without any previously existing lesion in the kidneys.

As to the treatment of the convulsions, the authors advise the use of chloroform, ether or nitrite of amyl by inhalation. Morphine in full doses may be used with advantage. The authors state that the use of morphia is attensed with very little risk, but its effect must, however, be carefully watched. Especially where uræmia complicates fevers must the greatest care be used, for these are the cases in which it is most likely to do harm. The bowels should be kept free, preferably with the vegetable purgatives. If calomel be used, It must be remembered that mercurial salivation is sometimes easily produced in Bright's disease. The skin should be kept active, preferably by the use of the hot pack or the hot air bath. If there is pyrexia, heat should be carefully applied and the temperature constantly watched. If there is any rise such an attempt to produce perspiration must be abandoned. Pilocarpin must be used with care for its use is not unattended with danger.

As the poison is contained in serous effusions as well as in the blood, and as resorption of these effusions may throw enough of the poison into the blood to cause uræmia, it is necessarv to withdraw effusions whenever met with, as early as possible. No condition of the patient will contraindicate tapping.

The authors also urge free venesection. They are of the opinion that it may abort an attack of uræmia. A pronouncedly weak pulse will in no wise forbid its employment, for they state that they have repeatedly seen the pulse strengthen while blood was flowing. The quantity to be drawn will depend upon the exigencies of the case and the effect produced, being, as a rule, not less than a pint, or even a quart or more. Bloodletting may be beneficially supplemented by transfusion of a normal saline solution Especially is this valuable where the loss of blood threatens to weaken the heart too much. The saline solution is also diuretic, and may possibly be a direct antidote to the poison. The transfusion may be done intra-venously in exceptional cases when time is of importance; but this may entail some danger unless most carefully performed. Practiced subcutaneously, it will be found that absorption is marvelously rapid. In a case of pulmonary œdema, where its use would be theoretically contraindicated, it was followed by a most prompt relief of the symptoms, which bloodletting alone failed to abate. Diuretics are practically of no value. The authors suggest that the origin of the poison may probably be found in the food and is produced somewhere in the digestive system. The paper is profusly illustrated.

F. Parkes Weber, M. A., M. D., M. R. C. P. (Lond.) contributes an article on "The Pathology of Arterio-sclerosis", in which, after considering various hypotheses, he confesses that the etiology ot arterio-sclerosis remains as yet uncertain. The condition must still be regarded as a primary one in pathology, though in some way allied to some of its alleged causes.

The remaining papers in this issue are: "The Therapeutics of Infectious Processes in the Nervous System," by F. X, Dercum, M. D.; "Foot-ball and the Physique of its Devotees, from the Point of View of Physical Training," by Henry G. Beyer, M. D., Ph. D., Surgeon U. S. Army.

Nævi and Maternal Impressions.

Since the days when a certain historic progenitor made large capital out of peeled saplings and probably from an even remoter age than his, there has existed, says the *London Lancet*, among mankind a belief in the causation of birth-marks by previous maternal impression. A singular illustration of this fact is to be found in a case lately recorded by one of the American papers. The mother, an Italian, while pregnant, was frightened by seeing a snake among some fruit she was handling. In due time her child was born, and from birth displayed a peculiar mark upon the neck. This gradually assumed the form and appearance of a serpent, was deeply pigmented, and somewhat scaly. The tale is, indeed, a strange one. Had it come through any less reliable channel than a publication of the Transatlantic press we should probably have dismissed without question its pretensions to veracity. As it is we cannot resist the impression that facts and appearances must have been much exaggerated and altered since the original facts of evidence went on the ever widening circuit of rumor. Nævi, it is well known, may occupy any part of the surface of the body, may vary indefinitely in shape, are usually pigmented, and frequently possess a thickened and rough integument. In view of these facts it is difficult, even with the aid of a description almost circumstantial enough to find the mimic snake its place among the Reptilia, to resist a conviction that imagination has done much in this history to give color and shape to a clinical curiosity. The whole theory of maternal impression, however appropriate, beautiful, or strange, partakes of a character too nearly related to allegory to secure for its revelations a place among the accredited discoveries of science.—*Maryland Medical Journal.*

PERISCOPE.

IN CHARGE OF WM. E. PARKE, A.M., M. D.

MEDICINE

Snuff-Tobacco as a Remedy Against Hiccough.

In the *Vratch*, No. 14, 1894, p. 423, Dr. G. Tatevosoff, of Vozdvijenskaia Slobada, Caucasian Russia, draws attention to the excellent services which may be obtained from the ordinary snuff-tobacco as a means for cutting short hiccough. He relates an instructive case of a patient with some chronic chest disease, accompanied by violent cough attacks in whom the latter used to be followed by extremely obstinate hiccough. The common remedies (including cocaine) failing to exercise any controlling influence on this most distressing symptom, Dr. Tatevosoff at last decided to give a trial to the said old-fashioned popular means, making the patient on each occasion thoroughly snuff into his nose a pinchful of the powder until the appearance of a lively sneezing. From the first *seance* "the effect was truly brilliant, the hiccough subsiding as if by magic." Under the influence of the simple remedy the attacks steadily became milder, and ultimately vanished, though the patient's cough remained as intractable as ever.—*St. Louis Med. and Surg. Journal.*

The Effect of Ether and Chloroform on the Kidneys.

Wunderlich (*Annals of Surgery*,) after the examination of the urine in 125 cases, before and after anæsthesia, draws the following conclusions as to the effect of ether and chloroform narcosis on the kidneys:

1. An already existing albuminuria is often increased by etherization. No such case in which chloroform was given was observed.
2. Albuminuria can be caused by narcotization with chloroform and ether, more often with chloroform, the relative frequency with which it occurs after the use of chloroform and ether being 11.5 to 6.9.
3. As a result of the use of chloroform, casts may appear in the urine. This is less frequent after the use of ether. The relative of frequency is 34.8 to 24.6.
4. When casts are already present, both anæsthetics have the effect of of increasing the number.—*Boston Med. and Surg. Jour.*

Epistaxis.

Plethoric cases are relieved by:

℞ Tinct. aconite..... gtt. viij
Liq. ammon. acetat..... ℥j. M

Sig.—Teaspoonful every half hour.

SURGERY.

The Dangers of the Long Rectal Tube.

The use of the long rectal tube in cases of obstruction, or supposed obstruction of the bowel, has never been looked upon with favor by good anatomists. The finding of the traditional needle in the haystack is but little more difficult than the successful maneuvering of the rectal tube through the twists and turns of the sigmoid flexure. The question of the value and safety of this tube having been asked of the *British Medical Journal*, the matter was referred to Mr. Harrison Cripps who replied as follows to that journal:

Traditions die hard, and notwithstanding the condemnation of the long rectal tube by Brodie, Treves and many other eminent authorities, I still find that in most cases of obstruction or supposed obstruction the tube has been introduced. Fortunately, these tubes are fairly soft, so that in a capacious rectum, when they impinge and are arrested about opposite the promotory of the sacrum, they simply coil up and do no harm. If stiffer ones are used, the patient's life is placed in imminent risk. A patient at St. Bartholomew's Hospital was to be operated on for ruptured perineum. In order to increase the supposed efficacy of the injection, a quart of soap and water, with some ounces of oil, were injected by means of a long tube. The injection never returned. A few hours afterwards, owing to the acute symptoms of the patient, I assisted one of my colleagues in opening the abdomen. The soap and water and oil we found in the abdominal cavity, and a hole below a reduplicated fold in the upper part of the rectum. The patient died. The idea that these tubes can be generally passed into and beyond the sigmoid flexure is a pure delusion, save in the rarest circumstances. As a means of diagnosis, or of treating stricture beyond the reach of the finger, tubes of any kind are absolutely useless. If a stricture is actually present, it would be 100 to 1 against the long tube or bougie entering it, for it would almost certainly catch in the cul-de-sac, generally caused by the invagination of the stricture. If a stricture be not present, the arrest of the bougie by the sacral promontory leads to delusive diagnosis. Brodie, in his lectures, alludes to a case in which a worthy practitioner had spent 150 hours in dilating a supposed stricture situated high up. The treatment had extended over a period of a year. Brodie, who was present at the post mortem examination, found there was no sign of a stricture, the bougie becoming arrested by a curve of the sacrum.—*Columbus Medical Journal.*

The Treatment of Fracture by Massage.

Sevenin, of Moscow, reports 24 cases of fractures treated by massage, and claims a great future for this treatment. To hasten union he gives three times daily a powder consisting of two grains of phosphate of iron and five grains of phosphate of lime. He demonstrates the beneficial action of this powder in relating his last four cases which took an unusual short time in healing. One of these cases, a fracture of the surgical neck of the humerus in a washerwoman of fifty-two years of age, showed no more crepitation on the eighth day, the abnormal mobility had ceased, and on the sixteenth day the patient could raise her arm in a horizontal position.—*Pacific Med. Journ.*

OBSTETRICS.

Diagnosis of Early Pregnancy.

Dr. R. L. Dickinson makes an interesting report of original investigations made by him to discover how early pregnancy may be diagnosed. He relies entirely upon the bimanual method of examination. It is easy to see that an expert in this method of examination, and one who has plenty of material, could certainly make a diagnosis at an earlier period than is usually the custom with practitioners. Dr. Dickinson concludes his article as follows: We offer then tentatively six bimanual signs of early pregnancy, stated in the order of their appearance and importance, and in the order of the frequency with which they are found, they run as follows (except that compressibility of the isthmus and the change of the consistency of the body possibly outrank the rest):

1. Bellying or bulging of the body of the uterus.
2. Elasticity or boggyness of the body of the uterus.
3. Compressibility of the lower uterine segment.
4. Transverse fold (about four to six weeks).
5. The longitudinal fold or furrow.
6. The decidual spot (about six to eight weeks).—*Atlanta Med. and Surg. Journ.*

Glycerine Injections as an Oxytocic.

Pelzer (*British Medical Journal*) read a communication on this subject at a recent meeting of the Cologne Obstetric Society. He had collected 28 cases, including 19 in his own experience. Glycerine was used 18 times for induction of premature labor; in 15 of these cases the pelvis was narrowed, in 2 there was Bright's disease, and in 1 placenta previa. To stimulate uterine action at term glycerine was injected in 7 cases of simple atony, in 2 of placenta previa, and in 1 for some other complication. The pains came on after an average interval of two hours following the injection. Eight to ten hours elapsed before complete dilatation of the os, or a longer space of time in cases of contracted pelvis. Two of the mothers died, both from severe eclampsia; the fetus was putrid in both cases. One child required craniotomy on account of its great size. Three children died from placenta previa and strangulation by the funis. One, hardly 32 weeks old, died a quarter of an hour after birth. Only in one case could the violence of the pains be a possible cause of the death of the child. The glycerine had done its duty. Pelzer, however, deprecates injudicious zeal about this method; 30 to 50 cubic centimetres, not 100 cubic centimetres, are sufficient for injection. The method is not suitable for cases of eclampsia and placenta previa, except the lateral variety, where the placenta can be avoided. —Geuer (*ibid*) read notes of three cases of induction of premature labor by injection of glycerine, in all of which both mother and child were saved. The first two mothers were over 32, with contracted pelvis; craniotomy had been performed in previous labors. The third case was an instance of bad eclampsia; 40 grammes of glycerine were injected, the os being at the time uncontracted; there was edema, with much albuminuria. Forty hours later a healthy living child was born.

ARMY AND NAVY.

CHANGES IN THE U. S. ARMY FROM SEPTEMBER 2, 1894, to SEPTEMBER 8, 1894.

Leave of absence for twenty days to take effect October 10, 1894, is hereby granted Captain Jefferson R. Kean, Assistant Surgeon.

Leave of absence for one month, to take effect on being relieved from duty at Washington Barracks, D. C., with permission to apply for an extension of fifteen days, is granted Major Joseph K. Corson, Surgeon.

Leave of absence for four months on Surgeon's certificate of disability, is granted Major Washington Matthews, Surgeon.

Leave of absence for one month and fifteen days to take effect on or about September 10, 1894, is granted Captain Charles B. Ewing, Assistant Surgeon.

First Lieutenant James M. Kennedy, Assistant Surgeon, will be relieved from duty at Fort Custer, Montana, and will report in person for duty at Camp Merritt, Montana.

THE

MEDICAL AND SURGICAL REPORTER.

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ORIGINAL ARTICLES.

FOREIGN-BODIES IN THE EAR: A WARNING.

ROBERT BARCLAY, A. M., M. D.,* St. Louis, Mo.

A patient, his relatives or friends, may often declare sincerely, under a positive conviction of its truth, that there is a foreign-body in the ear, and may importune—Nay! even demand its immediate dislodgement by interference at the hands of the medical practitioner. This is one of those crises where the physician must not lose his self-command; must be deliberate; must stand firmly on the rock of our calling, "*Be sure you're right; then go ahead!*"

Except when there is adequate reason for presuming that there is a live insect, or a corrosive chemical, within the ear, producing intolerable pain—where avoidable delay would be unnecessarily cruel, since an immediate instillation of or gentle syringing with warm water may give instantly temporary relief, with the least possibility of an injury to uninvolved parts,—with that exception: No matter how positive a patient, his relatives or friends, may be, that there is a foreign-body in his ear, never attempt the removal of such until you have first provided yourself with satisfactory illumination of the canal, examined the ear thoroughly by ocular inspection, and convinced yourself of the presence of a foreign-body.

To apply this rule invariably, with but the single exception above noted, is to protect the best interests of your patient and yourself; to disregard it, is to court disaster, as experience demonstrates not infrequently.

"How *not* to do it," and its consequences, are well illustrated by the following, from the writer's aural records:

Suspected Bug in the Ear; Drumhead Injured by Mal-treatment.—This gentleman (404102) on experiencing some unusual fluttering sensation in his right ear, thought that a bug had flown into it, and forthwith "poked at it with a pin," hoping to dislodge the suspected intruder. Failing in this, he sought the assistance of his office-boy, who also, employing similar measures, failed. Immediately thereafter, our patient consulted a reputable physician, who "worked at it in vain for an hour; poked it, and syringed it repeatedly," until discouraged; and "put no cotton into the ear after syringing."

The "movement of the bug" (?) persisting, and the ear having begun to ache, the patient was referred to the writer for further advice and assistance.

The above is substantially the statement made by the patient at our consultation, the following morning.

On careful examination at that time,

* Member of the American Otological Society; formerly Assistant Aural Surgeon, New York Eye and Ear Infirmary, New York; Aural Surgeon, St. Louis City Hospital, Missouri Pacific Railway Hospital, St. Louis Baptist Hospital, St. Mary's Infirmary, South Side Dispensary, Mariæ Consilia Deaf and Dumb Institute, House of the Good Shepherd, Etc.

the parts were found (Fig. 1) congested; particularly so, the manubrial plexus of blood-vessels. There was an abrasion of the postero-superior canal-wall, near the drum-head. A spot, resembling a traumatic perforation of the drum-head, just healing, was found just behind and on a level with the middle of the handle of the malleus. Whether this was really a perforation, or merely an abrasion of the drum-head, might readily have been determined; but would have necessitated, therefor, a displacement of the parts. And, inasmuch, as these seemed already disposed as favorably as possible for repair with least resultant deformity, it was deemed inadvisable to disturb them merely for the purpose of determining that question.

There was *no foreign-body* in the auditory canal!

Except for a gentle application of Succus calendulæ to the wounds, the ear was not disturbed; and complete recovery ensued within a few days.

FIG. 1.

Suspected Pebble in the Ear; Drum-head and Canal-wall Injured by Mal-treatment.—The mother of this three-year-old boy (104 275) took him to a physician, stating that he had "got a pebble into his right ear;" that his sister, five-and-one-half-years-old, had "put the pebble into his right ear at least they said she had;" that on examining the ear herself, and seeing what she believed to be the pebble, she had "tried" in vain "to get it out with a hairpin," until warned to desist by the child's complaints of "its hurting him." The pebble, she said, was by that time beyond sight. The little fellow experienced no special discomfort until his visit to the physician, who, presuming upon the mother's statement (substantially repeated above) and without making ocular inspection, attempted to dislodge the pebble by probing or raking the depth of the auditory canal with a steel-scoop or ear-spoon. He failed; but persisted in the attempt until impelled to desist by the screams and struggles of the child.

On the following morning this procedure was repeated, but more vigorously, by this physician; an efficient corps of "assistants" being employed to "hold" the little victim. Notwithstanding, the foreign body was not dislodged; but a "scraping sound" and a profuse hemorrhage rewarded the efforts at extraction.

The patient was taken by his mother, late on the same day, to another physician, who finding the ear badly injured, the condition of the parts unfamiliar, and the patient unmanageable, referred the case to the writer.

The terror of the child at our first consultation was pitiable, and was not surprising when the mother had stated, besides the above, that "she knew there was a pebble in his ear, for she had heard the instrument of the [first] doctor scrape against it while poking his ear." The sero-sanguinolent discharge from the meatus, of course aroused the writer's suspicion that the "scraping sound" had probably been that produced by the rasping of instruments upon forcibly-denuded bone,—doubtless upon the osseous auditory canal.

Informing the mother that if a foreign-body were present within the ear, and if the patient should, under my treatment, remain so restless and unmanageable, removal would have to be attempted under general anæsthesia; the writer advised a policy of gentle conciliation and mild treatment for a little. At the consultation, therefore, although the ear was discharging sero-sanguinolent fluid, nothing further was attempted than to gain the good-will and confidence of the little patient. This attempt was so far successful that at the next visit, upon the following morning, he allowed a gentle aural insufflation of powdered Boracic acid, and the placing of a wad of absorbent cotton in the concha of the injured ear. At the next, an afternoon visit, he allowed the introduction of a speculum, and a partial removal of the discharge with the cotton dossil. Thus, gradually, his confidence was gained, and at a thorough examination which he submitted to, a little later, it was discovered that the soft parts of the postero-superior canal-wall near the drum-head, together with the neighboring por-

tion of the membrana flaccida and vibrating drum-head, had been torn away from their bony attachment, and were flapping loosely in the discharges that filled the lumen of the auditory canal. The postero-superior osseous canal-wall was found partially denuded; and it was doubtless here that the impact of instruments had made the "scraping-sound." *No foreign-body* was found within the ear. After dressing the parts for a day or two with powdered Boracic acid until this last fact was demonstrated to his satisfaction, the writer explained the aural condition to the mother, informing her that he could find no foreign-body within the ear, and expressed the opinion that it was probable that she had been mistaken as to there having been one there. Her spirited denunciation of his ignorance and clumsiness in failing to discover the condition of which she had become so firmly convinced, and her rash threat of "getting *some* one to get the pebble out!" elicited from him a serious warning to the effect that "if she had been as positive and as importunate with the other Doctors as she had been with him, they were the more excusable for having done what he confidently could and would positively refuse to do;" and that "if she should obstinately persist in having the little boy's ear scraped for the removal of a foreign-body—which was not there—the suffering, and the deafness, and perhaps even the death of her child would be upon her own head, and due solely to her own obstinate and unreasonable prejudice respecting this matter of fact of which she had conclusively proven herself—as she naturally should be — incompetent to judge."

She did not return until weeks afterward, when she informed the writer that she had discontinued medical treatment with her preceding visit to him; that, "except for his otorrhea, the boy had sufferred no further discomfort from the presence of the pebble within the ear, which had not yet been removed," (?) but that "maybe the writer was mistaken about it, for she felt confident that it was still there." (?) Whereupon, with a few remarks as to the prognosis in tympanic abscess, the foregoing warning was repeated—and the case drifted into more obsequious, doubtless more skillful hands!

Instructive cases these! whose lesson, from a practical standpoint, is obviously that implied in the proverbial: "How to cook a *hare*. First—*Catch* your hare!" liberally translated for our purpose: To *remove* a *foreign-body* from the ear. First—The *foreign-body actually within* the ear. To sum up: As with every other abnormal or morbid condition, whatsoever and wheresoever, *so with foreign-bodies in the ear*: Diagnosis, *first*; TREATMENT, LAST!

THE ANTISEPTIC DRESSING OF THE UMBILICAL STUMP.

HIRAM CORSON, M. D., PLYMOUTH MEETING, PA.

In the editorial pages of the *Journal of the American Medical Association* (April, page 634) reference is made to an earnest plea, made by Dr. Joseph Allen (*American Journal of Obstetrics*) for more care of the cord in new-born children, and the article commended. And what does Dr. Allen recommend?

"The cord is ligated temporarily or clamped till after the nurse has washed the child. The accoucheur, having previously washed his hands and the child's abdomen and cord in an antiseptic solution, releases the ligature, strips the cord, pressing out as much of the contained gelatinous material as possible, and religates it with a silk ligature that has been rendered thoroughly antiseptic by being boiled in a strong solution of corrosive sublimate and afterward kept in a solution of iodoform in ether. The cord is then dressed with a piece of sterilized gauze, covered again with a pad of gauze soaked in chemically pure glycerin, and the whole retained by a sterilized flannel bandage. Each day the pad is removed and a fresh one, soaked also in glycerin, applied; as often as the retaining band becomes soiled it is changed."

Some months since an obstetrician and writer of much merit, published a paper, in which not an earnest plea, but pointed or-

ders were given to every physician who expects to be called to a case of labor, "to visit the patient at least three months before the expected time and make a careful *per vaginem* examination and an external abdominal one, to see if there are defects in the genital organs, or wrong position of the child to be corrected; and that these visits and examinations should be repeated at short intervals until the labor is near at hand." I have neglected to mention an inquiry and examination to which he referred; namely, "to ascertain the condition of the kidneys; whether or not there are threatenings of Brights Disease." All these visits and examinations are to be made by a doctor rendered thoroughly antiseptic from head to toe.

Now, while I consider this unasked—for interference, this securing a patient and loading her with a heavy medical bill, wholly unjustifiable, there is even a weightier objection to it. It frightens the patient. So earnest is the doctor, so positive are his objections, so frequent his visits, so alarming the fact that the urine must be so often examined, that the poor woman's fears are excited to a degree that makes her nervous and unhappy, when she otherwise would have gone on from day to day hopeful and joyous.

But you ask, "Why drag this subject into a review or criticism of the paper of Dr. Allen?" Simply because we are throwing around the natural and successful process of labor, requirements not needed in more than one case in fifty—if, indeed, so many as one—and because in cities—medical centres—women are made unhappy by such interference, such prognostics of danger if they do not strictly observe all the physician's details.

Now, about the care of the cord. This is a proper subject to think about. Dr. Allen has, yet, something to learn. I infer that he ties the cord directly after the child is born, cuts the cord and then hands the child to the nurse. Years ago, between 1860 and 1870, some of the members of our County Society, instead of tying the cord, cut it at once and let the blood fly—as it sometimes did to a distance of several feet. When it ceased to bleed, some left it without tying, while others, fearful that it might possibly bleed, secured it by a common thread ligature. My mind being thus called to the subject, I felt that it was wrong to spill so much of the blood that belonged to the child, and I resolved to see how much would be lost by cutting, or, which produced the same result, tying it soon after its birth, as seems to have been the habit of Dr. Allen. To ascertain how much blood is lost to the child by cutting the cord soon after the child is born, I (Case 1.) cut the cord of a healthy male child three inches from the navel, in two minutes after it was born I caught two ounces of blood from the cut end of the cord.

Case 2.—Female; caught two ounces in three minutes.

Case 3.—Male; caught two and a half ounces.

Case 4.—Male; caught slightly more than two ounces.

In every case there were more than two ounces, for I first caught it in a bowl and then poured it into a graduated glass. In doing this, some adhered to the bowl and some was lost.

Is it a matter of indifference whether the child is robbed of this blood or not? How is it disposed of in a natural case when the doctor is not present? It flows from the umbilical vein without hindrance into the body of the child; the cord collapses by a natural contraction; generally within a half an hour the pulsation of the umbilical arteries cannot be felt in the umbilicus of the child, and the cord, white, flaccid, shrivelled and without a drop of blood in it, lies before the observer. Here is where Dr. Allen, by tying the cord, is doing wrong. Had he let the cord alone until the pulsations had ceased, he need not have squeezed out any gelatinous matter. A child thus treated is in no danger from hemorrhage. The small, flaccid, bloodless cord dries and falls off in a few days, without a drop of pus being formed, without need of aristol or gauze pad—much to the disgust of the microbe—and without the officiousness of the obstetrician.

In the transactions of the Pennsylvania State Medical Society for 1872, I have reported thirty-four cases in which I observed the time during which the pulsations of the umbilical cord could be felt in the vagina before the placenta was expelled, and for how long a time they could be felt at the navel of the child. The circulation of the blood continues in the placenta until it is separated from the side of the womb, and even in cases where the

placenta quickly follows the child, the circulation may go on for many minutes. After a short time the arteries of the cord fail to force the blood to the placenta, and gradually the blood recedes until the pulsations cannot be felt in the stump—the projecting umbilicus. For many years, in view of these facts, I have waited before tying the cord until the blood in the vein had all passed into the child and the contraction of the arteries, beginning at the placenta, had gradually prevented the blood from the child's heart being forced into the arteries of the cord. I have, therefore, needed no antiseptics, and the fiendish microbe was not to be seen in that region.

I know by actual experience from repeated trials that, if the cord be not tied until after the blood has passed from the umbilical vein into the body of the child, not a drop of blood will escape from it if, afterward, it be not tied.

In view of these facts physicians should have patience; should allow a few moments to pass before tying the cord. Then they would see the cord which was turgid with the fullness of blood, lying empty; a white, flaccid, shrunken thing, which may be cut without fear of a single drop of blood coming from it. If when you take hold of the stump, as I call the then fleshy projection, the pulsations of the arteries can be felt between the thumb and finger, one must wait a little longer—and when this cannot be felt, one will then know that there is no danger of bleeding from the cord.

If it be important in this attention to the woman to insure her safety according to Dr. Allen, and so important in the opinion of the other writer that such elaborate measures as washing the child's belly with corrosive sublimate solution and using gauze pads, etc., be needed to avoid ulceration of the navel of the new-born child, why shall not the accoucheur give a few minutes of time to waiting for the blood to get into the child's body, when it will be secure from hemorrhage or having a sore navel.

It is painful to me to see enlightened physicians, even teachers of obstetrics, carrying on the old plan of tying the cord instantly after the birth of the child, when waiting for a short time would obviate the need to tie it at all.

I need not comment on the wrongfulness of these numerous measures and the danger of these washings with the poisonous corrosive sublimate solutions. The fact that millions of children born in our country every year do well without such measures must prove the impropriety, needlessness and danger of them.

CHRISTIAN SCIENCE AND MEDICINE.*

J. N. HUNSBERGER, M. D., SKIPPACK, PA.

It is a well-known fact that primitive man from time immemorial has allowed his thoughts and actions to be governed by the supernatural. The changes from day into night, the different phases of the moon, eclipses, storms, droughts, floods, in fact all changes that followed nature's laws were to him the display of the love or anger of whatever supernatural being he chanced to worship. And the cannibal, who today prostrates himself before his pile of stones, worships his god no less intensely or devoutly than does civilized man under the highest enlightened conditions of society. The difference is in environments, not in degree. The savage is satisfied with what seems an answer to his petitions, in the gratifications of his few wants. Civilized man is usually dissatisfied because all his petitions are not answered.

Huxley tells us, "suffering came into the world, not in consequence of a *fall*, but of a *rise* in the scale of being; so every further rise has brought more suffering. The amount and severity of the pain, no less than the variety and acuteness of the pleasures, have increased with every advance in the scale of evolution." Just as the highly sensitized plate of the camera reproduces quickly and accurately any impression made on its surface, so does

*Read before the Montgomery County Medical Society, May 9, 1894.

the exquisitely sensitive nervous gray matter of the highest grade of enlightenment reflect impressions, quickly and acutely, that cause pain or pleasure as the case may be. That we are steadily rising, steadily evoluting, no one can successfully dispute.

Let us quote again from Huxely: "The doctrine of evolution implies indeed a former state of innocence of mankind, but it is the innocence of the ape and of the tiger, whose acts, however they may run counter to the principles of morality, it would be absurd to blame. It is a reasonable supposition that in the earliest human organisms an improved brain, a voice more capable of modulation and articulation, limbs which bent themselves better to gesture, a more perfect hand, capable among other things of imitating form in plaster or other material, were combined with the curiosity, the mimetic tendency, the strong family affection of the next lower group."

But in spite of this mental and physical evolution we are, so far as our emotions and beliefs are concerned, not so distantly removed from the lower strata of mankind. We still believe Friday to be an unlucky day. We have not forgotten the superstition of the first glance at the new moon. We still pay our good dollars to be cured by quacks. We still believe the testimonials of wonderful cures effected by taking one bottle of somebody's patent medicine. We still go to Paris to be hypnotized or to be inoculated for hydrophobia. We still believe, as they did in the time of the Pharoahs, that charms, incantations and amulets will drive away all aches and pains, if only these charms, incantations and amulets can be called "by any other name."

> "But faith, fanatic faith, once wedded fast
> To some dear falsehood, hugs it to the last."

There is something so pathetic, because so intensely human, in the blind belief that draws thousands and tens of thousands of suffering humanity to pay homage to the Grotto of Lourdes and bathe in its holy waters. That thousands are temporarily relieved or permanently cured, the numerous crutches that decorate the walls of the grotto testify. When even royalty tramp about in the morning dew with naked feet, guided by an ignorant monk, we can to a certain extent sympathize with some of the superstitions of the less educated classes. Or, when such men as Brown-Sequard, with his expressed juice of the testicle, attempts to inject new life into the wreck of a man, we are forcible reminded of "when all others fail consult Dr. Snobb." Or, when Hammond, with his compressed extracts of brain, liver, lungs, ovaries, etc., attempts a cure by giving some of the hair of the dog that did the biting. Or, possibly, when Pasteur and Koch, with their lymph and hyperdic syringe—but why give you post-mortems. And yet these men represent the best in medicine, stand at the very top of the profession. "They do bestride the narrow world like a Colossus, and we petty men walk under their huge legs, and peep about to find ourselves dishonorable graves." They have thrown out a tempting bait; they have been rewarded with a nice string of suckers—more than a nibble.

It is the insane desire for something new, some royal road to success, that leads so many investigators to make misleading statements, arrive at false conclusions. The people demand something new in all the arts and sciences, and usually get it—such as it is. The press caters to this unnatural appetite; all sorts and conditions of men furnish the food, and there you are. Take your choice—hypnotism, hoodooism, faith cure, christian science. They are all practically the same; they have one common end in view. And so long as "faith is a higher faculty than reason," just so long will they create new diseases and invent new cures. "Even the earnest Charcot was accused of manufacturing new types of invalidism by his scientific performances at the hospitals, while some common doctor will rescue case after case by using methods which are not medical, but pedagogic and moral."

There is nothing new about christian science except its name and a few little details that are made to stand out so prominently as to conceal the identity of the old-fashioned faith cure. Christian science claims that the body should be at all times subservient to the mind; that if the mind wills it strong enough, the whole army of micro-organisms which are claimed to be the cause of infectious diseases, will be unable to gain entrance to the body. In fact it makes the human organisms a more impossible culture medium than a saturated solution of bi-chloride of mercury. As a lecturer

on christian science answered, in reply to the question, "What would be the effect on a person of a highly poisonous dose of strychnine?" "If the individual who took the dose had enough faith, the poison would be harmless." But, the lecturer added, it would require years of training in the art of christian science before the person would have faith enough to stand such a test.

This is simply absurd, and yet it is not any more absurd than some medical fads that have had a following in their day. The trouble is the pendulum has swung too far. Just at present, the awful danger of contracting phthisis has become the fad, and precautions, as ridiculous as they are unnecessary and annoying, are heaped on the stricken ones.

That christian science has a following of some of the most intellectual people, is uncontrovertable. It is a truth, that as we advance in the scale of enlightenment we still cling to the supernatural, but we demand that our ghosts come to us dressed and in their right minds. As Thomas Carlyle, in Sartor Resartus, so aptly puts it, "Witchcraft and all manner of spectre-work and demonology, we have now named madness and diseases of the nerves, seldom reflecting that still the new question comes upon us: What is madness; what are nerves? Was Luther's picture of the devil less a reality, whether it was formed within the bodily eye or without it? In even the wisest soul lies a whole world of internal madness, an authentic demon empire, out of which, indeed, his world of wisdom has been creatively built together, and now rests there; as on its dark foundations does a habitable flowery Earth-rind."

Every thinking medical man must realize that we are tending slowly but, nevertheless, surely, to therapeutic measures that have as their basis of treatment the patient's mind itself. I refer principally to morbid nervous troubles, of which we know but little. Just what these therapeutic measures should be is as yet undiscovered, but that potion and pill will enter into their makeup, I do not believe. They will have a great deal of opposition. "We are, as was Ephraim of old, wedded to our idols; we want to be let alone." We prefer to see our fellow beings suffer than to see them cured in an irregular way. We can't understand how an ignorant quack can cure (?) hydrophobia, while the scientific Pasteur loses 25 per cent. of his cases.

I believe that in the near future there will be a chair of psychology in every medical school in the world, where the best methods of securing control of the patient's mind will be taught. It will open a field hitherto undreamed of in the science of medicine. For if ignorant, uncultured charlatans can effect such wonderful cures, what may not be accomplished with the best minds of the medical profession directed to the subject. And what a training will be necessary for the scientific faith cure; what a study of mankind; what an opportunity for the development of individuality, and what a pleasure to know that your patient's mind is to you an open book, on whose pages you may inscribe the way to health.

Antiseptic Ointment.

After delivery in placenta prævia Dr. Q. C. Smith is in the habit of applying to the external genitalia:

℞

Olei pini pumilionis	
Olei sassafras	
Olei Camphor	ää ʒij
Olei cinnamon	ʒj
Sacchar. alb. in very fine powder	ʒiv
Lanolin	ʒviij

Mix well and make ointment.
Sig.: Apply as directed.

—*Virginia Medical Monthly.*

For Chronic Catarrhal Diarrhœa.

℞

Extract of rhatany	1 drm
Syrup of morphine	
Syrup of quince, each	12 drms
Lime-water	q. s. to 5 ounces

℞

Liq. perchlor. of iron	8-15 grains
Sydenham's laudanum	20-30 drops
Mucilage of gum arabic	
Simple Syrup, of each	1 ounce
Cinnamon distilled water	q. s. to 5 ounces

Sig.: Dessertspoonful every two hours of either of the last two mixtures.

—*Ther. Gazette.*

Diarrhœa.

Sapelier presents the following formulæ:

℞

Lactic acid	5 drachms
Simple syrup	6 ounces
Boiled water	1 quart

℞

Subnitrate of bismuth	8 ounces
Carbonate of calcium	
Phosphate of calcium	
Powder of rhatany, of each	2 ounces
Powder of crude opium	45 grains

M. Sig.: Two or three dessertspoonfuls a day, given in the lactic-acid solution.

COMMUNICATIONS.

LAPAROTOMY FOR RELIEF OF INTUSSUSCEPTION; WITH REPORT OF A CASE OCCURRING IN A CHILD ÆT. NINE MONTHS.

W. O. ROBERTS, M. D., Louisville, Ky.

On Tuesday, April 26th, at 12.30 p. m. I was called by Dr. Turner Anderson to do a laparotomy for intussusception. Dr. Henry Heuser, who happened in my office as I was starting, accompanied me. On reaching the house, we learned from Dr. Anderson that he had seen the case for the first time at 11 o'clock, and after a fruitless attempt to reduce the intussusception he advised a laparotomy and telephoned for me. The child had been sick since the Friday morning preceding our visit.

The child was nine months old, a girl, had always been perfectly healthy and was well developed. The attack came on suddenly without any assignable cause. It presented the usual symptoms, viz., intense paroxysms of pain, frequent straining at stool with passage of blood and mucus, and frequent vomiting. The intussusceptum extended to the anus, and was very deeply congested. A sausage-shaped tumor could be distinctly outlined in the left side of the abdomen; the abdominal cavity was but slightly distended. The intussusceptum could be pushed up as far as the finger would reach with perfect ease. While going under cloroform the straining effort forced the intussusceptum two inches outside the anus. As before stated it was quite deeply congested, but no ulcerations or excoriations were detected.

Notwithstanding the feeble condition of the child's heart, a laparotomy was performed. The abdomen was quickly opened in the median line between the unbilicus and symphysis, and the tumor was found a little below and to the left of the umbilicus. After gentle traction assisted by Dr. Anderson pushing from below the intussusception was relieved. It proved to have started at the cæcum, which had extended clear through the colon and the rectum taking with it the ileum and its mesentery. No injury was done the gut in the operation and it seemed to be in good condition after the intussusception was relieved. The child became pulseessl during the operation and a number of hypodermatic injections of whiskey were given. It was on the table only about twenty-five minutes. After being put to bed it was given morphine and atropine hypodermatically, and for a while rallied considerably, but finally began to sink and in a few hours, like the majority of such cases, it died.

In looking over history of intussusception I find that according to Treves three-eights of all casses of intestinal obstruction are due to intussusception. Heusner puts the proportion at three-fourths. The American Text Book of Surgery says thirty per cent., excluding cases due to herniæ and malformations, and Moullin estimates it at about one-third. Fifty per cent. of the cases occur in children under the age of ten years, and twenty-five per cent. in the first twelve months of life. Eustace Smith says that obstruction is rarely due to any other cause in children. Of fifty-two cases collected by J. Lewis Smith, thirty-one occurred during the first year of life. Hare, in his late work, says it is the commonest of all causes of obstruction, and during the first year of life it is more common than all the other causes combined. After the age of five years it becomes comparatively rare until the fortieth or fiftieth year, when it again increases in frequency of occurrence. During the first year of life it is met with more frequently in boys than in girls, in the proportion of about three to one, but as the age increases the relative disproportion gradually diminishes. Under twenty months of age those that are attacked are usually sturdy and well nourished children, while in older ones it is more frequently met with in those that are run down in health from some intestinal disorder.

Rilliet attributes this comparative frequency in infants to "the looser connec-

* Read before The Louisville Medico-Chirurgical Society.

tions of the cæcum in the iliac fossa at this age, and also to the imperfect development of its muscular bands which lessens its resistance to the penetration of the small intestine into its interior." J. Lewis Smith, I think, gives about the best explanation of the comparative frequency of the disease in children. He says "it is due partly to the anatomical character of the intestines in this period of life, and partly, doubtless, to the fact that there are more frequent irregularities in the intestinal movement than in older children. In fact the walls of the intestines are thin, the mucous and muscular coats and the connective tissues being much less developed than in those that are older; the mesentery and the meso-colon have also greater depth as compared with the same in other periods of life, except the meso-colon at the points where it passes over the kidneys, in which places it is very short, or even in some cases nearly absent. Moreover the space occupied by the large intestine, in which part of the digestive tube intussusception commonly occurs, is shorter relatively to the length of the intestine than in those that are older." In about thirty measurements which he has made of the length of the large intestine and the space occupied by it, the latter was found in the average about one-third that of the former, which, of course, necessitates doubling of the intestine on itself.

The varieties as to location are ileo-caecal, where the cæcum and ileum are turned into the colon; ileo-colic, where the ileum passes through the ileo-cæcal valve and finally brings along with it the colon; the colic, in which the colon alone is involved, and the enteric, where the invagination is located entirely in the small intestines. The ileo-colic is by far the most frequent. Treves says about seventy per cent. of all cases in babies are of this variety. After invagination takes place, peristaltic movements are excited and the intussusceptum is pushed farther and farther until frequently it protrudes through the anus.

In the case reported by Harrison Cripps (*Lancet*, June 2nd, 1888), "the patient, a child seven months old, was admitted to the hospital with the bowel in a gangrenous condition, protruding from the anus. It sloughed away gradually, and at the end of a month the case was discharged cured. The child afterward died of scarlet sever, and at the autopsy the small intestine was found attached to the anus. There were no traces of the ascending, transverse or descending colon."

In about one-half of the cases the children are in perfect health and the attack come on suddenly without any assignable cause. Most authorities claim diarrhœa, colic, tenesmus from any cause as constipation, polypus, phimosis, etc., play a considerable part as etiological factors. Jacobi and others deny this. Some cases seem traceable to falls. Jacobi reports one case that was produced apparently by a child being jumped up and down in it's nurse's arms.

SYMPTOMS AND TREATMENT.

The symptoms usually come on suddenly and with great violence, especially is this the case when invagination occurs at the ileo-caecal opening. The symptoms are much less severe when invagination is located in the colon. Pain is paroxysmal in character, due to the irregular peristaltic action of the bowels, and the paroxysms steadily increase in frequency and severity. Vomiting is a prominent symptom, not so marked, however, as in strangulated hernia, in the beginning of the attack, but after a while it becomes very marked. The abdomen at first is not tender, and slight pressure seems to give comfort to the patient; after a while when inflammation occurs, of course it becomes exceedingly sensitive. It is not always distended. In the beginning of the trouble there is not complete occlusion and the consequence is that distension is not marked, but after swelling takes place the lumen of the protruded portion becomes obliterated, then distension becomes very marked. In these cases, if not relieved, inflammation occurs and in a small proportion sloughing of the intussusceptum takes place, and in cases where this does occur, about forty-one per cent. recover. Many of these, however, afterward die from perforation of the cicatrix. A tumor can be detected usually in about one-half the cases. The prognosis is very bad.

In the American Text Book of Surgery it is claimed that about eight per cent. of the cases treated medically die. Treves gives the mortality in 133 recorded cases, where radical operations were performed, as seventy-two per cent. When reduction

was easy, it was thirty per cent., and ninety-one per cent. when reduction was difficult. Hare, in his work, gives the mortality seventy-four per cent. when the cases were treated medically, and seventy-five and four-tenths per cent. where abdominal section was done. In most cases where abdominal section has been performed, the cases have been treated for quite a while by medical means and, of course, it does not give the surgeon a proper showing. I have no doubt if early operation was performed that the mortality would be much less.

The medical treatment consists in the use of opium and belladonna for the purpose of relieving pain and quieting perisstalsis, then endeavoring to overcome the intussusception by injections and insufflation. Injections should always be used early in the case. If it is deferred until inflammation occurs, until the intussusception becomes fixed, then I believe it is exceedingly dangerous, the danger being over-distension and rupture of the gut. The same thing will apply to the use of insufflation. Some authorities recommend that injections be used without anæsthesia, so that it can be told by the sensation of the patient when there has been sufficient water thrown into the bowel. At the same time they reccommend that insufflation be used under an anæsthetic with the patient in the inverted position. After a trial of these means for a short time with negative results, then operative interference ought to be instituted at once.

The best point of doing a laparotomy is in the median line. It is usually not difficult to reach the intussusception by this incision, but if this cannot be done, it is a very easy matter to make an incision directly over the seat of the tumor. Great care should be taken in overcoming the invagination; by pressure upon the gut you can empty it to a certain extent of its distended blood vessels, then by careful pressure upon the protruding portion from below, as was done in the case I operated upon, you can usually overcome the invagination without much difficulty, provided inflammation has not occurred and adhesion of the serous surfaces taken place. When this has occurred they may be broken up usually by the use of a probe.

Where we fail to relieve the invagination then it becomes necessary either:

First—To make a lateral anastomosis above and below the intussusception; or,

Second—To resect the affected portion of the gut and make an end to end anastomosis; or,

Third—To make an artificial anus.

The mortality is always very much greater where the trouble occurs in the young.

Cor Adiposum.

Schott (*Deut. med. Woch.*) observes that, although there are no certain signs of this condition, there are several symptoms, such as the general state of the patient, the condition of the heart sounds, rhythm, etc., which makes the diagnosis very probable. Often this fatty deposit in and about the heart cannot be distinguished from fatty degeneration. The author gives some account of the physical and dietetic treatment of the disease. The object of the dietetic measures is to diminish the amount of fat. There is no means of making collections of fat disappear from certain parts of the body. The fat round about the heart disappears last in starving animals. Thus the improvement in the patient's condition cannot be brought about in this way. Purgative measures are harmful, and the doubtful effects of iodides are often further obscured by other symptoms produced by them. If anæmia, diabetes, gout, and especially arteriosclerosis, be present, dietetic treatment must be adopted with great caution. Any considerable loss of weight must be carefully guarded against. Patients who have lost weight in consequence of treatment by mineral waters and dietetic restrictions may develop signs of cardiac weakness. As regards limitation of fluids, the amount of alcoholic beverages must be lessened. It is probable that the loss of weight which may occur when fluids are dimished is really due to the impaired appetite. The author's methods of treatment consists in methodical exercises, bath treatment, etc. He thinks his treatment may be carried out with benefit, and without the risks attending other methods reccommended. He quotes cases to show that unpleasant symptoms may be removed without the patient losing weight. It is only when the heart has gained strength and is not to be distinguished from a normal heart that any thinning treatment should be adopted. Any rise of temperature is also a contra-indication to it. Moderate exercise in the fresh air, which may be increased later, is useful, but over-exertion may produce unpleasant symptoms.

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SATURDAY, SEPTEMBER 29, 1894.

EDITORIAL.

NEGLIGENCE.

The physician, more than any other professional man, is sensitive to criticism. This is due, probably, to the peculiar characteristics and relationships of his profession, to the high standard of individual qualifications which must be attained to deal with the many complex issues involved in practice, to the varied and strong competitions with which he must contend, and to the jealousies with which he must combat—jealousies multiform in expression, sometimes creditable, generally discreditable.

Zeal for mastership in the profession grows with the ever widening domain of its science and art, and with the equally progressive intelligence of the people. Possibly this zeal receives no slight stimulus from the increasing difficulty of taking, in the character of a quack, refuge from the consequences of practice as a professed physician.

Diligence may justly be claimed as one of the salient merits of the great body of the profession; yet negligence may occur with the overworked physician as well as the underworked, indolent or indifferent, though for very different reasons. But errors and negligences are closely scrutinized and receive but little sympathy either popular or judicial.

The tests of what a man knows in his professed art or science may not be those of scholastic refinement, but the tests of his practice are chiefly those of the fidelity with which he applies what he knows; the simple tests of professional and moral duty. There is no continuous duty in which one can engage without, at some time or other during its discharge, becoming liable for negligence. By its very limitations, the human mind is incapable of perfect diligence. The chief danger is that diligence may become intermittant.

Two kinds of neglect must be borne in mind—negligence in commission and negligence in omission. The niceties of distinction between the two is of little moment here. It is the sequence, the mischievous consequences, the natural and probable results of the negligent act or omission that are of vital concern.

The legal liability of a physician comes under the same rules that govern in matters of the business expert generally. He is obliged in each case to apply such

diligence as good physicians, called under similar circumstances, are accustomed to apply. Negligence, as interpreted in civil relations, is an "inadvertant imperfection by a responsible human agent in the discharge of legal duty, as produces in an ordinary and natural sequence, a damage to another." The inadvertancy or want of due consideration of duty is the injury.

No general rules can be laid down as to what constitutes negligence. To make the physician liable, his negligence must stand in immediate causal relation to the injury. The diligence of the physician must be more than that of common-sense. It must be the diligence of science and skill. A person who, without special qualifications, is called upon to attend a sick person, is expected to apply such diligence only as is bestowed in such cases by persons of ordinary common-sense, and is liable only for failure in such diligence.

As a rule, the degree of diligence required is proportionate to the duty and responsibility imposed, and the degree of negligence imputed corresponds to the degree of diligence exacted. In each case, negligence is the failure to bestow the care and skill which the situation demands.

It is conceded that the negligence of the specialist varies with the nature of the specialty and the intensity of the duty. The skill of the specialist must be that which he usually employs ; he must show himself an expert in the particular branch with which his reputation associates him—if an oculist, he must show himself an expert in his specialty; he must exercise a greater amount of skill and care than is implied by the word ordinary. For a person without the necessary qualifications to undertake a business requiring skill, is itself an act of negligence, causing damage but not implying an intent to injure. The surgeon who undertakes an operation for which he has not the proper qualifications, is liable for the damages his unskillfulness works.

Diligence should extend to those having the care, nursing and management of the patient. Neglect of such often involves the physician in trouble. There may be no liability, yet culpability. But there exist not a few instances where legal liability has been found on the part of the physician, where there was mismanagement or neglect on the part of those having charge of the case. Cases of this character stand, by analogy, upon the same ground with a common class of cases—*e. g.* an action for the recovery of damages caused by alleged defects in highways. The liability of the town is established, the injury proved and the resulting effects become the subject of inquiry. Whereupon the town claims and endeavors to prove that, owing to mismanagement or negligence in treating the injured party, the consequences have been aggravated. Such showing on the part of the town does not touch the cause and right of action, but the measure of the damages only.

There may be negligence as to instructions needful to be given patients. It has been held by the courts that a physician who had attended a broken limb, was liable for injuries resulting from failure to give instructions as to the use of the limb after the patient's discharge.

A patient under treatment may injure himself, yet he may recover of the physician if the latter carelessly or unskillfully treats him afterwards, and thus does him a direct injury. It must be remembered that there are few ailments in which the patient may not be charged with more or less negligence.

There is a negligence that grows out of over-anxiety or of timidity. It is a factor in many accidents and injuries, and is a frequent cause of fatal results. Lord Macauley has illustrated this aptly:—"Queens, it has often been said, run far greater risk in child-bed than private women, merely because their medical at-

tendants are more anxious. The surgeon who attended Maria Louisa was altogether unnerved by his emotions. 'Compose yourself;' said Bonaparte, 'imagine that you are assisting a poor girl in the Faubourg Saint Antonio.' Bonaparte knew mankind well; as he acted toward the surgeon, so he acted toward his officers." Knowledge, skill, nerve, dexterity and diligence are the requirements.

It is good law, and sound reason as well, that more should be required of the specialist than of the non-specialist. He must put into his work what he professes to the world. It must show in his results. He must possess fertility in expedients, and promptness and intrepidity in applying the right remedy, at the right moment and in the right way, to the right thing.

As Mr. Huxley succinctly states it;—"There is really only one way of ennobling any calling, and that is to make those who pursue it really masters of their craft, men who can truly do what they profess to be able to do and what they are credited with being able to do by the public. And there is no position so ignoble as that of the so-called liberally educated practitioner who, as Talleyrand said of his physician, 'knows everything; *even a little physic*,' who may be able to read Galen in the original, who knows all the plants from the cedars of Lebanon to the hyssop upon the wall, but who finds himself with the issues of life and death in his hands, ignorant, blundering and bewildered, because of ignorance of the essential truths upon which practice must be based."

ABSTRACTS.

TUBERCULOSIS IN CATTLE.

[The results of investigations dealing with the serious question of tuberculosis in cattle from both economical and sanitary standpoints are embodied in an important report of the Agricultural Department prepared by Dr. Theobald Smith, chief of the Animal Pathology Division. The report in part is as follows:]

In making tests the temperature of the inspected animal should be taken every two hours, at least six or seven times before making the injections. The most convenient place for an injection is the side of the neck where the skin is thin, and a large strong needle gives much more satisfaction than a small, fine one. Seven or eight hours after the injection the temperature should then be taken, and from then on every two hours until a decided reaction, continuous during several hours, has occurred, or until eighteen or twenty hours have passed since the time of the injection. To attack tuberculosis as it exists at present, is a most difficult problem, and no single measure, however sweeping, is likely to be successful. The present wide dissemination of the disease, and its prevalence among other domesticated animals, as dogs, cats, horses, and, above all, its prevalence among man, makes the complete extinction of the malady an unrealizable problem. Infection through the air is the most serious problem to be dealt with. A question of such practical consequence is the effect of repeated infections. That cattle may be infected more than once is self-evident. The more frequent infections the more rapid the disease and the speedier the danger to other animals. The fewer the tubercle bacilli in the air, the more reduced the danger. It is highly probable that cattle may, under conditions, inhale a few tubercle bacilli without permanent injury. The importance of reducing the amount of infection in a herd by all possible means, and keeping it permanently reduced, is one necessary condition for the successful eradication of tuberculosis.

Primary infection through the air is more frequent under existing conditions than any other mode of infections; early stages of the disease may consist of glan-

dular affections only; extent and rapidity of the disease depends at least in part upon the number of tubercle bacilli inhaled either within short or long periods of time; tuberculosis of the lungs is not necessarily associated with any other recognizable lung affection as a pre-existing favoring condition. Tuberculosis of the liver is probably in most cases a result of food infection. Tuberculosis of the membrane seems to cause less damage to the animals affected. It takes place principally by escape of bacilli from some forms of the disease situated under one of the serum coverings, as lungs, liver, intestines and associated lymph glands. It does not appear probable that organs are invaded to any extent by tuberculosis starting on their serum covering. The tubercle bacilli appear to be usually carried in lymph channels with the current, but a case of evidently retrograde movement of the bacilli has been noticed. The virus of tuberculosis does not vegetate in the blood, its presence there being accidental. In the more advanced stage of the disease infection of the blood may occur repeatedly. Generalized infection may be recognized by the discovery of disease in organs not accessible to the virus in any other way than through the circulation or in the lymph glands of such organs. Tuberculosis of the subcutaneous lymph glands and of those situated in the muscular tissue of the trunk and limbs, is universally accepted as indicative of the generalized disease. Such glands may be infected from without, but infections through wounds in the skin are quite rare. Generalized infection, both chronic and acute, has obtained considerable attention owing to its important bearing on the infectiousness of meat and milk. In all cases of generalized disease the milk should be regarded as dangerous. The difficulty, from the practical standpoint, lies in the recognition of the generalized infection during life. With the meat the question is simple and resolves itself into thorough inspection of every carcass at the abattoir by trained inspectors, and with the living animal there are only a few guides, such as the conditions of the udder lymph glands or fragment of some superficial lymph glands.

The region of the throat and of the small intestines are more likely to absorb tubercle bacilli early in life than later on, while the lungs seem to become, with age, the preferred seat of the disease. Demonstration of this assumption is complicated by the fact that calves are more exposed to food infection than adult animals, because of the dangers of tubercle bacilli in the milk. There is every reason to believe that most of the tuberculosis of cattle is not demonstrated at or before birth, but is contracted by contagion later on in life. Cattle owners should pay special attention to the condition of udders, a disease which is particularly dangerous because the milk at first appears normal for some weeks, and, therefore, would be used with impunity. With this disease the only danger to other herds lies in direct contact or in the transfer of a diseased animal or of milk from such an animal. The greatest danger exists in the immediate surroundings of the infected and loses itself as the distance increases. In order to control any infectious disease it is of the utmost importance to recognize in the living animal not only advanced stages, but even the slightest infection. It is essential that the tuberculin test be repeated not later than after an interval of six months, so as to reveal cases not detected at the first test. Cattle owners should become familiar with the general nature of tuberculosis, thereby lifting themselves above the plane where quackery and specifics abound, and understand precisely what to expect after the disease has entered the herd, and how to meet the demands of public health. Sanitary precaution should begin the removal of diseased and suspected animals. The investigations show that the milk of tuberculous animals is not so frequently infected as supposed.

Milk of animals in the earliest stages of the disease, and with perfect udders, does not contain tubercle bacilli. Only those showing signs of labored breath and emaciation should be gravely suspected and their milk excluded at once from sale.—*Public Opinion.*

Tænia.

Dr. Descroizilles prescribes the following mixture:

℞

Ethereal extract of male fern	ʒij
Calomel	gr. vj
Peppermint-water	ʒiiss
Gum arabic	ʒi¼
Simple Syrup	ʒv
Distilled water q. s. ad.	ʒij—M.

—*La Medecine Moderne.*

A NEW THEORY OF THE NERVOUS SYSTEM.

Every one knows that the nervous system seen under the microscope, whether it be a question of the brain or the marrow, consists of two principal elements. The first of these elements are the long fibers, the thin threads, placed side by side in great numbers and in a very particular manner. These threads appear to play the part of conductors: they connect the marrow to the brain, the different parts of the brain to each other, or they form the nerves, connect the muscles to the marrow, or place the latter in communication with the sensitive organs: the organs of touch, of the retina, of the internal ear, of taste, of smell. These threads serve to transmit shocks, vibrations, from one part of the nervous system to the other; they are like telegraphic wires which transmit the current from a distance; they are the advance routes, the roads of communication.

The elements of the second group are physiologically higher. They are composed of the nervous cellules. These cellules form the essential part of the nervous centers; it is the cellules which are met by the conducting threads, and the nervous cellules have from all time been considered as centers, as points from which are developed the modifications, the vibrations, of which the nervous fibers are finally made the vehicle. The nervous filaments have the form of threads; the cellules are little bodies of irregular form which, from their angles, send out a certain number of very fine fibrils. For a long time, histologists have been trying to find out the exact relation of the cellules with the threads and the cellules with each other. Not long since, an Italian, Golgi, gave us some very important information on certain sides of these questions. He discovered a method of coloring which permitted him to separate certain elements, so that some of them remained uncolored, and in this way he showed that the fine network of fibrils which surrounds each nervous cellule is furnished, not with a protoplasmic substance, but with elements of a purely nervous structure which are subdivided in proportion as they are removed from the cellule. There is a network of protoplasmic prolongations, but these are not connected with those of the neighboring cellules: they have a free termination, most often in the vicinity and in contact with the capillaries, and represent a system of roots, by means of which the cellule is nourished with the contents of the capillaries. They are not at all nerve conductors.

These views of Golgi at first created great surprise, for they made the cellule simply a sack of nutritive moisture. It must, however, be admitted that these views are exact. A Spanish scholar, Ramon y Cajal, has completed these experiments in a very comprehensive manner. He has furnished us with a very clear idea of the true relations of the cellules. Each of these forms an apparatus, giving birth to two orders of fibers. Some of these are centripetal or cellulipetal, and form a passage for the vibrations coming to the cellule from without; the others are cellulifugal, and serve as passage ways for the vibrations going out from the cellule. The first are the protoplasmic filaments; the second are the threads or fibrils of the nervous structure. The two elements of the network surrounding the cellule have then two different functions: by means of one the nervous vibrations arrive; from the other, they depart. But the principal fact made manifest by Ramon y Cajal is that there is no continuity between the two orders of fibers. Tne cellulifugal fibers of a given cell do not mingle with the cellulipetal fibers of a neighboring cell as was formerly believed: there is only proximity and contact. This amounts to saying that there is no fixity or immutability of the network of communication between cellule and cellule: a vibration does not necessarily pass by a pre-established way. This is of the greatest importance, not only from an anatomical point of view but still more and above all for psychology, heredity, education and conduct. It is a well-known fact that no first performance of anything is satisfactory. But in what does this work consist? In forming, establishing a way of communication. If the fibril network were fixed, if the ways were pre-established, work would be easy, and it would be difficult to comprehend why exercise renders frequent operations so easy to transmit until finally they become almost

automatic. But from the moment we find the ways are not fixed, and that they are only established by repetition and exercise in a more or less different manner for each individual, and that several ways may be formed, everything is explained. If the habitual way is obstructed, a new one may be formed; the vibrations take a different road, but reach the same goal. We then have an anatomical base for the well-known differences shown by different individuals with regard to the acquisition of any talent, no matter what. The capacities, the predispositions are determined by the anatomy of the structure, predispositions which may be purely physical, intellectual and even moral. We must then change our conceptions with regard to criminality and morality. We owe to the refactory elements of society more pity, more humanity, but we have less hope of drawing them from the condition in which we find them. I have only attempted to indicate the questions which are raised; but it is enough to show in what distant domains this work of Ramon y Cajal finds its echo.—*Henri de Varigny in the Paris Revue des Revues* in *Public Opinion.*

TREATMENT OF ACUTE AND CHRONIC ULCERS.

Dr. DeCourcey in the *Louisville Medical Journal* writes:—

I have found no classes of diseases yielding to treatment with greater reluctance than "old sores," or chronic ulcers. Recently, however, I have adopted a plan of treatment which is quite different from that laid down in the books, and my results have been much better.

Almost without exception, internal, or constitutional, as well as local treatment, is necessary.

The internal treatment should be directed to the seat of the malady, thus eradicating the general pathological condition, eliminating the poisons and disease germs from the system.

To accomplish this object, absolute cleanliness (internal and external), plenty of pure air and sunshine, the religious observance of the laws of hygiene, and a wholesome nutritious diet, are more useful and restorative in their effects than are drugs. All the secretory organs of the body should be required to perform, as nearly as possible, their natural amount of work.

This once accomplished, and all nature's machinery kept lubricated and in good working order, the local treatment and work of reconstruction will be comparatively easy.

The sores, ulcers, acute and chronic, must be kept clean. This is done very satisfactorily by the application of hot water. If the parts cannot be soaked in the hot water, an ordinary fountain syringe can be filled with water (as hot as can be borne without burning), elevated high enough to give sufficient velocity to the stream which is played over the parts by the operator holding the nozzle of the syringe a short distance from the seat of the application. The frequency of the washing will depend upon the nature of the case, but should be repeated as often as necessary to keep it clean and free from offensive odors.

To destroy pus and bacteria, and to aid nature in the work of rebuilding the parts invaded, I have found hydrozone and glycozone superior to any and all other agents tried.

Hydrozone is first applied (after the hot water) by the use of an ordinary glass dropper, or hard rubber syringe, slowly, all over the ulcer, until the pus is destroyed. Effervescence, or fermentation, continues until the enemy is quite dead, but no longer. One layer of absorbent cotton is saturated with glycozone and placed smoothly over the parts, and held in place by a cotton bandage, sufficiently tight to hold the cotton in place.

Other local medication might do as well in some cases, but I have not so found it. The result obtained in the case I report herewith, seems to confirm the statement as above made.

Edw. K., age twenty-three; American, but German descent; a farmer by occupation; unmarried; rather small in stature, but well-built; having taken sixteen bottles of "blood purifier" and a lot of "anti-constipation pills" within the last eight months for "falling sickness," came to

my office March 19th, with both legs most frightfully ulcerated, from knees to ankles, with considerable discharge of pus from various parts of the legs. Such a case should have been sent to a hospital or sanitarium for the best systematic treatment obtainable, but, unfortunately, he was so situated that he could not be sent to such a place. In a most pleading way he asked me if I could do him any good. I told him I thought so, if he would mind me, and take the treatment that I should advise. He promised, and the treatment was begun.

The legs were cleansed by soaking them for twenty minutes in hot water twice a day, after which hydrozone was used freely all over the sores, to destroy the pus, the pustules having been opened and as much pus evacuated as possible.

After this application, morning and evening, the legs were powdered all over the affected portion with a mixture of equal parts of alum, boric acid and aristol, then covered with absorbent cotton, and bound up with an ordinary cotton gauze bandage.

This local treatment was kept up for two weeks. The improvement was slow, but constant. The process of healing advanced from the knees downward and from the ankle upward, leaving the last part to heal about the middle of the leg, where the ulceration formed a thick crust, extending two-thirds around each leg.

The constant discharge of pus from the sores caused the dressing to stick to the parts, which could not be removed without difficulty.

The alum, boric acid and aristol powder was discontinued and glycozone used as a reconstructive agent, from the end of the second week. The sores were washed and the hydrozone used as before mentioned, then the glycozone was applied to the whole affected parts. A layer of absorbent cotton was saturated with glycozone, and smoothly placed around the sores, and held in place by a cotton bandage.

There was not any further trouble about the bandage adhering to the sore. The granulation was much more rapid than at first. At the end of the next week the results were very gratifying. At the end of the second week after hydrozone and glycozone were used as the sole local agents, the young man said he was well, and worked every day from that time.

The internal treatment was changed from time to time as the case required. Opiates were given several times during the first two weeks of the treatment, to ameliorate the pain, which was very great at times. He was much emaciated and melancholy when he first came to me. His bowels would not move without cathartics.

Fluid extract nux vomica was given morning and noon, seven drops before each meal. Elixir lactopeptin, with bismuth, was given in drachm doses after each meal, and, occasionally, laxatives at night. Later on, tincture chloride of iron was given, in ten drop doses, after each meal, for one week.

After the third week no internal treatment was given, as the patient was in good condition, happy and cheerful.

Hydrozone and glycozone were left to complete the structure, and to place upon it the capstone of a beautiful new integument, which they did in a way gratifying both to the patient and to myself.

Infantile Diarrhœa.

Ewald prescribes:

℞
Benzonaphthol .....
Bismuth, subnit.....
Resorcin.....ää gr. iss

M. Sig.: For a child 1 or 2 years old one such powder every two hours until six have been taken.

Dr. Comby sometimes orders

℞
Naphthalin..... gr. xv
Pulv. sacchar..... ʒiiss
Ess. bergam..... gtt. v

Mix and make into 20 packets. From 5 to 10 packets daily, according to the age of the child.

It may be given thus (Baginsky):

℞
Naphthalin..... gr. iss
Calomel..... gr. i-6
Pulv. sacchari..... ʒv

M. Sig: For 1 packet. A child 2 or 3 years old may take 5 or 6 packets during the day.

Dr. Filatow relies upon

℞
Naphthalin..... gr. ij
Bismuth. subnitr..... gr. ij½

M. Sig.: For 1 packet. One such packet every two or three hours for a child of 2 or 3 years.

—*La Medicine Moderne.*

For Bronchorrhœa.

℞
Copaiba..... ʒiij
Tincturae chloroform compositae.. mxx
Mucilaginis acaciae..... ʒvij
Liquoris potassae..... ʒj
Aquae cinnamomi .....ad ʒviij

Misce et fiat mistura.
An eighth part to be taken three times daily.

—*Western Medical Reporter.*

THE PAY OF PHYSICIANS AND SURGEONS.

The physician is generally sure of a good living, but he must work hard to gain it. The incomes of professional men can be estimated only in an approximate way. Since the amount of money earned is considered by the public as a measure of appreciation of services rendered, there is a strong tendency to give as facts what should be, rather than what actually is. Physicians form no exception to this rule. The average annual income of a physician in full practice in a large city may be stated as $2,000, and in the smaller towns and in strictly rural districts $1,200. Two or three physicians in New York make over $100,000 each year; five or six range from $50,000 to $60,000; fifty from $25,000 to $30,000; one hundred and fifty from $10,000 to $12,000; about three hundred from $5,000 to $6,000; fifteen hundred from $2,000 to $3,000 and the remainder from $800 to $1,000. When we endeavor to estimate the average income of the doctor, we must consider many controlling influences which bear upon his work. When he begins practice, his income will probably range from $800 to $1,500 per annum.

Payment for medical services varies in different localities. In the large cities the fees are always comparatively higher. But even in New York the charges are not extravagant. The general family practitioner charges from $2 to $5 per visit to the patient's house. The average of such fees for the wealthy is $5, although twice that sum is usually demanded by practitioners whose practice is mostly limited to that class. Office consultations by experts range from $10 to $25, as do also consultation visits. Visits out of town are from $10 to $20 for each hour of absence from home, plus traveling expenses, and the regular fee of $25 for the consultation itself. Surgical operations command the highest prices, and also range according to the skill and fame of the operator, from $100 up into the thousands. Night calls are twice the amount of day calls, whether ordinary or consultation visits. While all this is true of the established practitioner, the younger men must be content to take one dollar in their offices. In many of the smaller towns the physician gets no more than half a dollar for an office visit, and but twice that for a call within a mile from his home. Those physicians who confine their practice to a special branch make larger incomes than those who do a general practice. But when we take into account the long preparation necessary, the special studies that must be made and the time spent in attaining proficiency and reputation, the difference in the end is not so great as might at first be supposed.

The pay of the profession in different countries averages about the same when the relative cost of living is taken into account. The fees in Paris for surgical operations run from $200 to $5,000. Except that the latter sum is not infrequently paid, there is no difference as compared with American or English rates. Still there are only three or four surgeons in Paris who can command such prices, and only two who are reputed to make $100,000 a year. The Parisian fee for a surgeon called in consultation is $20, whether in his office or at the house of the patient. The consulting physician receives somewhat smaller pay, the amount ranging from $12 to $20 per visit, while at his office it is from $4 to $10. The highest annual income of a French physician is $40,000, although the late M. Charot is reported to have made much more. The general practitioner in Paris averages $2 per visit, but in aristocratic circles he demands $4. Allowance must also be made for smaller living expenses in Paris than in London or New York. In comparing our fees with those of the German physician and surgeon it is well to understand that, although a German mark is reckoned as equivalent to twenty-five cents, its purchasing value in Germany equals our dollar here. Thus the German family doctor, while he nominally gets but 2 marks for an office visit, can really count on $2 of actual worth to him. The specialists of Berlin and other large German cities charge from 5 to 10 marks for outside calls. The first-class medical authorities, who are necessarily professors in the universities, charge 20 marks in their offices and 30 for house visits. All other things being equal, we can count the average earnings of the German family

doctor to be about 5,000 marks, and the consultant's and professor's income 10,000 marks.

The late physician to the Prince of Wales received for four weeks' attendance at Sandringham, during the illness of his distinguished patient from typhoid fever, not only the usual title of baronet, but a fee of £10,000. Sir Morell Mackenzie is reported to have received more than twice this amount for his treatment of the late Emperor Frederick of Germany. His Royal Highness the Nawab of Rampur, India, recently paid an English army surgeon £50,000 for a three-months occasional attendance in an ordinary attack of rheumatism. This is said to be the largest fee ever paid for medical services in that so-called heathen country. The late Sir Andrew Clark, Gladstone's physician, often charged $1,000 for running down from London to Liverpool, and the late Sir William Gull commanded equally high rates for similar services. A Russian surgeon charged a wealthy notable of Odessa $6,000 for opening an abscess of the hip, the time occupied being about ten minutes. And better still, while on the same visit, he took a chance shot at another patient in the shape of a similarly simple operation, for which he received nearly $1,500 more. But in all this it is not so much the doing as the knowing how to do. When the French peasant said that there were not ten francs' worth of paint on Rosa Bonheur's "Horse Fair," he was incapable of valuing high art. "Five dollars for amputating the leg," said the surgeon, "and nine hundred and ninety-five for knowing how"—and the victim was thankful accordingly.—*Dr. George F. Shrady, in the Forum for September.*

THE BUBO PLAGUE IN CHINA, WITH A BRIEF ACCOUNT OF THE GREAT PLAGUE OF LONDON.

BURNSIDE FOSTER, M. D.

The first extensive epidemic of the plague, of which history has recorded any definite account, occurred in the sixth century, A. D., and is usually described as the Plague of Justinian, since it existed during nearly the whole of that emperor's reign.

Although there are some discrepancies in the various accounts which I have consulted, the epidemic seems to have had its origin in Lower Egypt in the year 542. From its starting point it traveled up the Nile, and then leaving that stream it swept with increasing fury into the interior of Asia Minor. Constantinople was visited, with the result that for some days the people died at the rate of 10,000 daily. In the next year it traveled over Greece and Italy; in 545 it extended into Gaul and in the following year reached the cities of the Rhine. During the seventy years of its existence this fearful disease visited all the parts of the known world and its victims were numbered by millions. In several instances historians have recorded that more than half of the population of many of the cities, perished, and that scarcely people enough were left alive to bury or destroy the bodies of those who died.

During the succeeding years of the Middle Ages we have no knowledge of any very extensive plague epidemics until the sixteenth century. In the year 1500 it raged in Germany, Italy and Holland for seven years; in 1534 in southern France; in 1562 for six to eight years it was pretty general throughout Europe. During these epidemics we find it recorded for the first time, that to some extent epidemics were considered preventable, and that there were attempts at disinfection and insolation. Sulphur, arsenic and alcohol were among the earliest disinfectants; and the plague physicians, "Pest Medici" as they were called, wore special gowns and masks and anointed their hands and arms with medicated oil before coming in contact with the sick. During this and the seventeenth centuries a number of severe and fatal epidemics of this dread disease occurred in all parts of Europe, but the one of which I will make special mention is the Great Plague of London which occurred in the year 1665.

De Foe's "History of the Plague," and

the "Works of Dr. Thomas Sydenham," a very eminent physician of that time, give from their different points of view, such a comprehensive and interesting account of the events of that dreadful year that I shall quote from them both in some detail:

In September, 1664, there began to be rumors in London that the plague was again raging among the Dutch and in the latter part of November two men said to be Frenchmen died of the plague in a house at the upper end of Drury Lane. During the next few months there were occasional cases in the same part of the city, but it was not until early in the following May that there began to be any serious apprehension. With the warm weather the cases became more numerous and in the second week in June about one hundred died of the plague in the out parishes and the disease began to appear in the city, and by July 1 the pestilence had become so general that business of all kinds was suspended and many of those who had the means to do so shut their homes and places of business and fled to the country. The panic among the people became so great that many went mad through fear and others deliberately committed suicide to avoid the infection.

De Foe records that the posts of houses and corners of streets were plastered over with doctors's bills and papers of ignorant fellows quacking and tampering in physic and inviting the people to come to them for remedies.

"Infallible, preventive pills against the plague. Never failing preservatives against infection. Sovereign cordials against the corruptions of the air. Anti-pestilential pills. Incomparable drink against the plague. The only true plague water. The Royal Antidote against all kinds of infection, and such a number more that I can not reckon up, and if I could would fill a book of themselves to set them down."

Others assuming specious titles summoned people to their lodgings by such bills as these:

"An eminent High Dutch physician, newly come over from Holland, where he resided during all the time of the great plague last year in Amsterdam and cured multitudes of people that actually had the plague upon them."

"An ancient gentlewoman having practiced with great success in the late plague in this city, Anno, 1636, gives her advice only to the female sex."

"An Italian gentlewoman, just arrived from Naples, having a choice secret to prevent infection, which she found out by her great experience, and did wonderful cures with it in the late plague there, wherein there died 20,000 in one day."

"There is no doubt," says De Foe, "but these quacking sort of fellows raised great gains out of the miserable people, for we daily found the crowds that ran after them were infinitely greater, and their doors were more thronged than those of Dr. Brooks, Dr. Upton, Dr. Hodges, Dr. Berwick, or any, though the most famous men of their time."

The Lord Mayor and Aldermen adopted very sensible and very stringent measures for the separation of the sick from the well, and for general disinfection, which doubtless had a considerable effect in controlling the disease. An infected house was at once shut up and a watchman appointed to guard it day and night, to see that none entered or left it without special permission. By this means, harsh and cruel as it was in many instances, the infection was to some extent confined and localized. During August the deaths became so numerous that it was impossible to give decent burial to the bodies. Great ditches were dug, and the bodies, without discrimination were cast into them. It was estimated that above ten thousand houses in London were deserted and that about two hundred thousand people left the city. From August 8 to October 10, according to the mortality bill there died in London 59,810 people, of whom 49,605 died of the plague, The total number of deaths from the plague during the epidemic is placed by De Foe at 100,000. From November 1 the number of cases began to diminish, the death rate of those attacked became smaller and as winter came on, people returned to London, resumed their business and by February of the next year the great plague was over.

In regard to the nature of the infection by which the disease is spread, De Foe, after discussing various opinions says: "Others who talk of infection being carried through the air only, by carrying with it vast numbers of insects and *invisible creatures*, who enter into the body with the breadth or even at the pores with the air, *and there generate, or emit acute*

poisons, or poisonous ovæ which mingle themselves with the blood and so infect the body." Strange that the actual discovery of germs and of the ptomaine theory should have been delayed for two centuries!

The symptoms of the disease are thus described by Sydenham:

"Its first approach is almost always accompanied with shaking and shivering like the fits of an ague; presently violent vomiting, a pain about the region of the heart, a burning fever with the usual concurrence of symptoms perpetually afflict the sick till either death itself or a happy eruption of a bubo discharges the morbifick matter and so frees them from that deplorable condition. It does now and then happen that it comes without any sense of fever before and suddenly kills men; the purple spots which are the forerunners of death breaking out as they are about their business. But this sudden death scarce ever happens but at the beginning of a dreadful plague. It sometimes also happens that swellings appear when neither a fever nor any violent symptoms went before. The victims sometimes died within a few hours of the first symptoms, and rarely lingered beyond four or five days. If the buboes suppurated it was considered to be a favorable circumstance and they were therefore treated by incision or by caustic."

The other local manifestations were carbuncles, furuncles and ecchymoses. A peculiar and characteristic stench was omitted from the bodies of the sick. At the beginning of the London Plague upwards of 90 per cent. of those attacked, perished. Towards the end of the year the disease seemed to have become milder and the mortality was much less.

I have gathered from various sources a pretty accurate description of the epidemic now devastating China, and its identity with the above is undoubted.

The disease first appeared in the Province of Kwantung in the latter part of March and spread principally among the poor and filthy, with frightful rapidity. More than half a million people perished in two months and the groat commercial centers, Canton and Hong Kong, were soon attacked. In the former with a population of 1,000,000, the number or deaths exceeded 100,000!

The symptoms are thus described: With or without premonitory warning in the shape of malaria or chill there is a sudden onset of fever, rising to 105° F. or over; there is much headache and cerebral disturbance accompanied by stupor. In from twelve to twenty-four hours glandular swellings occur in the neck, armpits or groin, rapidly enlarging to the size of a hen's egg; these are hard and exceedingly tender; with or without a decline of the fever the patient sinks into a deeper condition of coma and dies usually at the end of forty-eight hours or sooner. If six days are reached recovery is hopeful. The glandular swelling shows no signs of suppuration, in some cases epistaxis or vomiting of blood occurs. Petechiæ appear in a few, but there is no regular eruption. The mortality is about 90 per cent.

In the latter stage of the disease, when the local manifestations are most apparent, the fever usually diminishes and their occurs a sticky and very offensive perspiration. The inguinal and femoral glands are those most commonly affected, although those in the axilla and neck are often involved at the same time. The carbuncles are of less constant occurrence than the buboes and are usually seen on the lower extremities, the buttocks and the back of the neck. Among the sequelæ in those who finally recover, are continuous suppuration of the büboes, abscesses of the skin and muscles, pneumonia, dropsy, partial paralysis and mental disturbances.

The malady is undoubtedly a filth disease and caused by a bacillus. Indeed, Professor Kitasato, a competent bacteriologist and a pupil of Koch, claims to have discovered the specific germ. There is no doubt and it has been repeatedly demonstrated during the last one hundred years that efficient quarantine gives absolute protection from the disease, and that modern sanitary means can rapidly stamp out an epidemic should a few cases be imported into a well ordered community. It has been well named, "the disease of barbarism," from the fact that it only occurs among the semi-civilized. There is little to be said concerning treatment. There is no known specific and the treatment, like that of all acute fevers, must be supporting and symptomatic. Should there be given sufficient opportunity to study this disease scientifically, which is not at all likely, I am convinced that the only specific medication would be found in the development of the antitoxin theory. It is also probable that immunity might be given by inoculation of an attenuated virus.—*Jour. Amer. Med. Ass'n.*

SOCIETY REPORTS.

LOUISVILLE MEDICO-CHIRURGICAL SOCIETY.

May 4, 1894.

[STENOGRAPHICALLY REPORTED BY C. C. MAPES.]

ABDOMINAL TUMOR—CONTINUED REPORT.

DR. A. M. CARTLEDGE: This gentleman, Mr. H., was before the society one month ago for examination because of an abdominal tumor. The concensus of opinion at that time was that the spleen constituted the tumor. Some days afterward I did an exploratory section and the trouble was found to be the liver which is displaced, with a number of adhesions around it, showing evidences of several attacks of circumscribed peritonitis. The adhesions were carefully separated, but the liver was, of course, not raised to its normal position. In the light of second knowledge, it is very easy to demonstrate the situation of Mr. H's liver; he has no liver in the normal site. It has not been quite four weeks since the operation, and his recovery from it has been uneventful.

I believe there has been great relief. He says he feels much better; the liver has decreased very much in size, being now almost normal except its situation; his complexion has also improved very much.

DISCUSSION.

DR. T. S. BULLOCK: I saw Dr. Cartlege perform the exploratory laparotomy on this man; in fact, I was the anæsthetist, and he called my attention to the situation of the tumor, and its appearance. It could be demonstrated at first glance that there was absence of the liver in its normal situation, and its presence in this abnormal position—a dislocation of the liver.

DR. A. M. CARTLEDGE: Mr. H. has been examined repeatedly by some of the brightest and most eminent doctors, as he says, in several States, and no one even suggested that the trouble might be the liver. It has been diagnosticated various things, but the correct diagnosis was never made until after the exploratory incision.

DR. J. W. IRWIN: I recollect that I examined this gentleman when he was presented by Dr. Cartledge before the society on a former occasion. I am very glad that the doctor brought the case before us again to-night and corrected a very grevious error. It seems reasonable that any man should be able to tell by percussion whether there was dullness in the region of the liver or spleen, but this case seems to be one that has misled—so to speak—a great many. At the previous examination his abdomen was more tympanitic than it is to-night; there was not any very marked dullness over the region of the spleen, in fact hardly any, and there was perhaps not quite so much over the region of the liver; yet there was some defined dullness. However, the case was hardly one that would be considered in a perfect state for examination, the abdomen was very tympanitic at that time, neither was his position from necessity such as we would like to have. But this illustrates a very important thing—how ready we are to give opinions without making a thorough and careful investigation of the case. I believe I am among those who stated at the previous examination that there was practically no dullness over the region of the spleen, and can only account for it as I have stated.

DR. TURNER ANDERSON: It is the most remarkable case that I have ever seen presented to a medical society. I have never before seen a case where the liver was in the left iliac fossa.

DR. A. M. VANCE: I examined this man when he was before the society on a former occasion, but did not make any diagnosis. The case illustrates the fact that we ought to be very careful and go slow in making our diagnoses in such cases.

DR. T. S. BULLOCK: I was present when several of the members percussed

this patient's liver, and although Dr. Cartledge stated when he presented the case that there was a suspicion that it was a displaced liver, he was not certain until he made the exploratory incision. I listened while Dr. Marvin and several others percussed the region of the liver at the first examination, and thought I detected the normal dullness of the liver, and was very much surprised to find when exploratory incision was made, complete absence of the organ in the normal situation. Dr. Cartledge at the operation demonstrated to his own, and to the satisfaction of every gentleman present, the absence of the liver in its normal site; he demonstrated the lobes of the liver and the gall bladder in the abnormal position, and there can be no question about its being a displaced organ.

PARALYSIS FACIALIS.

DR. W. O. ROBERTS: Two weeks ago this young man while driving in a dog cart, his horse fell and he was thrown out striking his head on the pavement. He was unconscious for fifteen minutes. After regaining consciousness he was taken home in a carriage, and had considerable hemorrhage from the ear. Then hemorrhage kept up, not continuously, but at intervals, for forty-eight hours; there was not succeeding the hemorrhage any watery discharge from the ear. Tuesday following the accident facial paralysis was first noticed. I had him come here to-night because I thought it was a case that would be of interest to the specialist. He evidently has either a fracture through the temporal bone involving the canal through which the nerve passes, or a clot, or inflammatory product. The accident occurred in Friday and facial paralysis developed the following Tuesday. All that was done in the way of treatment was during the time the hemorrhage was going on, the ear was thoroughly irrigated with hot water with a view of stopping the blood. Since then it has been frequently irrigated, because, while there was little or no discharge from the ear, it was quite offensive. Dr. Ray has examined the case and can tell us the condition in which he found the canal.

DISCUSSION.

DR. J. M. RAY: Dr. Roberts kindly asked me to see this patient on Wednesday following the accident. I examined first his ear by the speculum; found the roof of the canal had been pushed down. The surface of the drum membrane was covered with blood which had become dry. There was no discharge from the ear. As far as his hearing powers were concerned, air conduction was destroyed but he could hear the turning fork by bone; this I think demonstrates the fact that the internal or nervous portion of the ear is not involved. Therefore there is a fracture probably extending through the roof of the canal and through the membrana tympani into the roof of the middle ear, involving the Fallopian canal. The question of course comes up as to whether the paralysis is due to fracture and pressure by a spicula of bone upon the nerve, or wheher it is due to hemorrhage. The prognosis to a certain extent also depends upon that. I have seen several cases of this kind which recovered very promptly. Fractures through the temporal bone are, I think, quite common in head injuries. Dr. Vance will recall a case that we saw some time ago. I reported the case at the time and looked up statistics on the subject and found there was quite a variety of opinion, some authorities claiming that the fracture did not involve the roof of the middle ear unless there was escape of the cerebrospinal fluid, others claiming that frequently there is no escape of fluid. Buck reports cases where there was no escape of fluid and very little hemorrhage. Fractures through the middle ear cavity and even fractures about the base, are quite frequently overlooked. I have seen several cases of head injuries where there was paralysis of different muscles; Dr. Vance will remember the case of a child I saw with him where there was paralysis of the sixth nerve from head injury, and at the same time enomous retinal hemorrhages. The child recovered very promptly.

DR. S. G. DABNEY: It would seem to me that from the paralysis coming on three or four days after the injury, the case should be regarded as more hopeful. If there was a fracture and pressure of a spicula of bone on the nerve, we would naturally expect paralysis to have taken place immediately, Ruptures of the drum membrane from falls or blows on the ear are not rare. This spring I saw one produced by a snow

ball hitting the ear. I have seen several cases similar to the one shown to-night, but without the facial paralysis; I do not remember to have seen one having that feature. I remember one case resulting from a child sliding down the bannisters, falling at the bottom and striking the head. There was unconsciousness for sometime and later there was quite a free discharge of blood, without any watery discharge from the ear. There was a rupture of the drum membrane with some disturbance of gait, and later some disturbance of sight of the same side. Taking into consideration the disturbance of sight led me to make an ophthalmoscopic examination in that case, and I found the retinal veins of the corresponding eye considerably engorged. All the symptoms disappeared in a few weeks, the drum membrane healed, and the hearing was good though never quite perfect.

DR. WM. CHEATHAM: It seems to me that what Dr. Dabney says about the case shown by Dr. Roberts is about correct. The paralysis coming on so late leads me to believe that it is most likely from swelling and not from pressure of a spicula of bone. My experience has been in these cases of paralysis that they get well but that they are a long time doing so. I have seen them as long as three years making a satisfactory recovery, especially where the eye muscles have been involved. In a great many cases there is some general disease of the nervous system, which should be taken into consideration in making a prognosis.

DR. TURNER ANDERSON: I associate this case with Bell's paralysis, the result of trauma very similar to the conditions that we observe in forceps application where the momentary depression of the mastoid process is such as to permit undue pressure upon the nerve as it passes through the canal.

DR. J. W. IRWIN: Two or three years ago I saw a boy sixteen years old who had been struck by a sixteen pound iron ball on the frontal os; he was knocked senseless. I saw the patient five hours after receipt of the injury and he had some bleeding from the ear, followed by a straw colored discharge—serum. There was no paralysis attending the injury. I think very likely in Dr. Roberts' case the diagnosis is correct, and I believe the trouble is due to inflammatory effusion. Whether there is a fraction or not, no one can tell.

DR. H. A. COTTELL: About the only question arising in the case is the location of the hemorrhage; the probabilities are that the trouble is due to pressure upon the facial nerve the result of inflammatory action as Dr. Anderson suggests. It is possible, however, that the condition is purely hemorrhagic. You can indulge in almost any number of theories as to the cause, but one thing is certain, there is pressure upon the nerve in the Fallopian canal. I should say the prognosis is favorable in such a case; about as favorable as it usually is in Bell's palsy. It is well-known that Bell's palsy is originally a traumatic palsy. The way the disease came to be called "Bell's palsy" was by virtue of the fact that Sir Charles Bell attempted to relieve a very severe facial neuralgia (before the function of the fifth and seventh nerves were discovered) by incising the seventh nerve. This produced complete paralysis. Bell's palsy was therefore originally a traumatic palsy. We know that in ninety-nine cases out of a hundred of Bell's palsy, (paralysis of the facial muscles) the trouble is in the Fallopian canal; the facial nerve in going from the internal auditory meatus to the stylo-mastoid foramen traverses a certain part of the petrous portion of the temporal bone, and any trouble—be it congestive, traumatic, inflammatory or whatever it may be—causing pressure upon the nerve in that region will produce what we call facial paralysis. If all the muscles are involved, we know that the trouble is peripheral; if there is involvement of only a few of the muscles, we know the trouble is central. The majority of cases completely recover. In the case before us I should incline to make a favorable prognosis, but I believe electro-therapy is indicated in the case.

Dr. W. O. Roberts presented a report of

LAPAROTOMY FOR RELIEF OF INTUSSUSCEPTION; WITH REPORT OF A CASE OCCURRING IN A CHILD AET. NINE MONTHS.

(See page 428.)

DISCUSSION.

DR. TURNER ANDERSON: Dr. Roberts has reported the case so fully that there is really nothing left to be said. I saw the

patient one and one-half hours before the operation. The child when first seen presented the unmistakable physiognomy of a serious illness, that was simply all. It was being carried around the room upon its mother's arm and would occasionally manifest evidence of abdominal pain, but was not screaming; except for the pinched appearance of the countenance, I would scarcely have recognized that the child was more seriously ill than when suffering from an ordinary attack of colic. But the history of the case was important; the child had been ill four days under the care of a very excellent medical practitioner. He had suggested the day before that an operation be performed, and I am satisfied had made (although I do not know positively) a diagnosis of the condition. Diagnosis of the case was not difficult; the abdomen was not especially distended, in fact there was very little tympanites, but there was a sausage roll extending from the region of the sigmoid flexure upwards for about four or five inches, and at variable intervals the child would manifest considerable discomfort and straining. Upon inspecting the rectum there was no difficulty in detecting the protruding mass just within the sphincter, which, as Dr. Roberts has said, came out after the child was partly under the influence of the anæsthetic, possibly two inches through the sphincter muscle. I had the child suspended by the legs and introducing my finger into the rectum I could press up the invaginated portion, and at first I pressed it so far that I hoped it had been returned. I could feel all the way around it, could dilate the gut to such extent as to make the diagnosis complete. It began at the cæcum, passing through the colon, carrying with it the vermiform appendix and pulling down the smaller bowel as it descended through the large bowel and rectum to the anus, so that when it was relieved the last portion to come out was the cæcum and the appendix. The cæcum and appendix were so enlarged and œdematous that had they been seen at first there would have been a suspicion that the trouble was malignant in character. In other words, the morbid processes had extended to such an extent as to at first sight make the condition questionable.

With reference to the symptoms in these cases: I think the most important are straining, bloody dejections and the absence of natural alvine evacuations. Ordinarily a tumor can be detected, such, at least, is my experience.

DR. A. M. CARTLEDGE: The only case of obstruction of the bowels that I have seen in the young child occurred in a little girl three years of age and was volvulus. The only case of invagination I have seen in a surgical way in the adult occurred in a young man in Indiana about a year ago. I exhibited the specimen and reported the case at some length before this society at the time. The invagination was at the ileo-cæcal valve and was about eight inches in extent. I resected the invaginated mass and made an end to end anastomosis, but necrosis and gangrene had taken place at the time of the operation and the patient died three hours afterward.

DR. A. M VANCE: I have never performed a laparotomy for intussusception, although I have seen several cases in which operation has been advised by others. I was recently called to see a child five months old reported to be suffering from invagination; I did not think operation advisable in the condition in which I found the child. The child died the day following. It is a wonder to me that invagination does not occur oftener, when we consider the tremendous suction power of the intestine. I have demonstrated this a great many times in operating upon dogs in endeavoring to make an end to end anastomosis. In approximating the afferent and efferant ends, the afferent would sometimes be sucked into the lower and requiring considerable force to bring it back by the suture attached. I can understand readily how when invagination starts it would be carried right along by the sucking power of the intestine, the bowel above contracting and the muscular coat relaxing below forcing the intussusceptum downward very rapidly. In making an end to end anastomosis upon dogs I have often inserted my finger into the end of the lower portion of the intestine and the suction and contraction is so great as to make it perceptibly painful.

My experience is that babies particularly stand abdominal surgery very badly. I think the percentage of deaths would be more than double as compared with people who are older.

DR. C. SKINNER: I do not think all cases of appendicitis should be condemned

to the knife, but do believe that all cases of intussusception belong to the surgeon.

DR. H. A. COTTELL: As I stated before a recent meeting of this society, in discussing ths question of appendicitis, the only case of intestinal obstruction, which was probably appendicitis never made out, that I had seen which proved fatal occurred in the person of a child two years of age. We had the counsel of several eminent physicians and at least one eminent surgeon. The case was decided non-operable, the opinion being based upon the extremely tender age of the patient. I am satisfied, however, that a case in the hands of Prof. Anderson or Prof. Roberts would get all the chances of life that science could give it. I doubt if operation on any patient of such a tender age could be done with any reasonable hope of success.

DR J. A. LARRABEE: It has been my fortune—or misfortune, I take it—to have seen quite a large number of cases of intussusception. In looking back over my practice I can recall by name thirteen cases, 12 deaths and one attempt at recovery. One of them came very near being a repetition of the very strange case referred to by Dr. Roberts to-night. A negro child that lived three weeks after sloughing of the intestine, then died of perforation.

One point mentioned by Dr. Anderson in regard to these cases has been borne out by my experience, i. e., the diagnosis is not as difficult as it might at first present. It is a little strange that earlier diagnosis is not arrived at when we take into consideration the facts already recited to-night. The history of these cases is that they are always of sudden occurrence; next, the peculiar facial expression—Dr. Anderson has alluded to that, and I consider it one of the best points made in connection with the subject—there is not as much pain as is manifest in ordinary colic, but there is never a case without that peculiarity of expression which he has so correctly described. Again, I have never seen a case in which I was not able to make out a sausage-like tumor, except one. This occurred in a child suffering with an attack of varicella; intussusception came on without any cause, and like most such cases occurred suddenly at, or immediately after, straining at stool.

Dr. Vance has brought up a very significant fact in this connection, viz.: the suction of the intestine; when the intussusceptum once gets started it is carried on by this suction. Most of the cases I have seen have occurred immediately after efforts at stool. As I have already stated the diagnosis in my experience has been comparatively easy; I have never made more than two visits before satisfying myself as to the diagnosis. As Dr. Skinner has very correctly said, these cases are strictly surgical just as soon as they are diagnosticated, and with the power of making early diagnosis, with the facts against its being anything else, either in the very young or the very old, I think the surgeon ought to be employed very early. I am a little surprised to hear Dr. Vance say that babies stand abdominal surgery so badly; I did not know that the operation was attended with such fatal results. I think the hope we have for relief by means of surgery is greater than by medical treatment; in my experience five days was the limit of life in these cases treated medically.

DR. W. L. RODMAN: I think the relative frequency of intussusception in children is clearly due mostly to anatomical reasons; due to the same cause which makes hernia so very common in young children. In early childhood the mesentery is nearly twice as long relatively as it is in the adult; this same mesentery becomes again elongated in older subjects. This to my mind explains the comparative frequency of intussusception and hernia in the young, and in advanced age.

I fully agree with the position taken by Dr. Roberts as to the treatment. I feel that the importance of surgery in these cases cannot be over-estimated. While enemata may relieve a few cases in the very early stage of the trouble, and I think it should be always tried, just as taxis should always be tried in early strangulated hernia, I am satisfied that it should be tried no longer than taxis in hernia, and should the enemata fail to relieve the case very promptly I am thoroughly satisfied that the case demands early laparotomy. I therefore agree with the essayist that most of these cases call for a laparotomy, though they should certainly be treated medically at first. I hardly believe that the morality is as great as statistics would make it appear. If the cases could be seen and operated on as

early for instance as in strangulated hernia, I think the results would be very much better than they now seem to be. Certainly nature will do less for these cases than obtains in strangulated hernia, therefore early laparotomy for relief of the intussusception is demanded, and when the operation is done early in the attack I believe results will be more favorable.

TUMOR OF THE MAMMARY GLAND—OPERATION.

DR. W. L. RODMAN: This specimen is the left mammary gland removed from a young woman, married, twenty-seven years of age, kindly referred to by Dr. Goslee of Carrollton, Ky. She gave the history of having borne one child aged three years, which was nursed for eighteen months. Shortly before Christmas last she noticed a small hard lump about two inches above the left nipple. It was painful from the first, but grew more so gradually. Her general health I may say was not good, and an examination of her urine showed quite a perceptible amount of albumen. This made me hesitate as to whether or not I should remove the tumor, but, on account of the fact that it was causing her considerable pain, and the mental distress was very great on account of the presence of the growth, I thought it wise to remove the gland. I did so one week ago last Wednesday, removing the entire organ, as I believe that to be the only treatment for any form of neoplasm of the breast whether benign or malignant. I may say that I thought before the operation that this tumor was probably benign, notwithstanding the fact that she had complained, of considerable pain. It has not yet been microscopically examined, but this will be done in the course of the next few days and I will make a further report. I take it to be a fibroma. Fibromas of the mammary gland are sometimes attended with pain, just as they are in other situations. The axilla was not invaded as I thought the growth was begin. The mammary gland was removed in its entirety an elliptical incision eleven or twelve inches long being made. In changing the dressings yesterday I found that the wound from end to end had healed completly without a single drop of pus. I gave chloroform and administered a very small quantity of it, removing the breast very rapidy so as to not damage the kidneys more than they already were.

DISCUSSION.

DR. H. A. COTTELL: Cases of neoplasm of the breast are always interesting to me, because of the fact that the first case I ever saw, which occurred fitteen years ago in the practice of Dr. E. R. Palmer, in the person of a darky girl, doth breasts enormously enlarged. Under treatment non-surgical those breasts were soon reduced to the normal condition. I remember the case very distinctly, and know the darky to-day and she has raised quite a family of children. The condition was always a mystery to me. The mammary glands are normal to-day. Of course we may have any sort of neoplasm of the breast—sarcoma, carcinoma, epithelioma, endothelioma, etc., and we may have fibroma, adenoma or simply an inflammatory condition which we may call hyperplasia. A great many cases of mammary tumor which are condemned to the surgeon's knife I am satisfied are simply the result of an inflammatory action following an abscess.

The worst case of neoplasm of the breast that I ever saw, which progressed most rapidly, which proved to be malignant, returning after operation to destroy the woman's life, was under the microscope purely an adenoma; under the most careful examination it was impossible to make out any species of cancer.

While we are on the subject of carcinoma, etc., I recall some statements I made seventeen years ago which will bear a repetition: When you come to the question of cancer, you are never sure that the tumor you are dealing with is malignant or non-malignant in character until you can demonstrate infiltration into the surrounding structures. For instance you take a pure epithelioma beginning in the rectum, or cancer of the bowel, and it is to all intents and purposes a normal structure until it has broken loose and begins to infiltrate into the surrounding structures. It is a common thing in demonstrating pure epithelioma, to show students a normal section of the rectum, then afterward show them what is called cylindrical epithelioma, and no distinction can be made until the muscular coat of the bowel, the peritoneum or surrounding organs have been invaded by the disease.

DR. W. L. RODMAN: How many specimens of pure adenoma of the breast have you examined microscopically?

DR. H. A. COTTELL: I do not recall of course the exact number, but perhaps a dozen.

DR. W. L. RODMAN: Gross in his book on tumors of the mammary gland, says that he never saw but one case of pure adenoma of the mammary gland—fibro adenomas are more common. Bryant called them adenoceles.

DR. H. A. COTTELL: If you insist upon *pure adenoma*, it may make some little difference, of course I referred to the cases usually denominated adenoma, and it is a fact that a great many of these cases do occur.

I have a case that I would like to report which as far asmy experience is concerned, is rather unique. A boy aged six years was brought to my office to-day, who in climbing a ladder carrying a bag in a difficult position discovered when he came down from the ladder that he was weak and out of fix. This happened a week ago. He went into the house and told his mother that something had happened to him, that he had hurt himself in some way. She told him to go up stairs and go to bed, that she thought he would be all right shortly. He found it very difficult to get upstairs. In a few hours he came down crawling on his hands and knees. The condition of the boy is peculiar; he has complete paralysis of the left leg, involving the muscles of the hip, muscles of the back below a certain line, below the dorsal region, incontinence of urine; everything below that totally paralyzed. I suppose we would call it *quarto-plegia*—it is not hemi-plegia, and not para-plegia. The right limb is in perfect condition. By the use of electricity the reaction of degeneration is not marked. I report the case because I want some light thrown upon it if possible. I am of the opinion that it is a case of spinal hemorrhage; it is certainly peculiar that it should have so affected the spinal cord. The boy's temperature and pulse are normal. There are no symptoms of any kind except complete loss of both motion and sensation in the left leg, and incontinence of urine. The patient was referred to me by a physician in the country. I suggested that the case be put upon iodide of potassium and ergot for two weeks, with instructions that the result be reported to me at that time. I take it to be a case of limited spinal hemorrhage. We all know very well that certain violent straining exercise, certain things which twist the spinal cord may produce hemorrhage.

Caustics in Malignant Growths.

Of late the tendency seems to be to use caustics in treating certain malignant growths, especially those of the skin and superficial parts. Dr. John Parmenter, in the *Journal of the American Medical Association*, advocates the use of caustics on the ground that recurrence of the growth is less frequent, that caustics have a selective action and that they reduce enlarged lymphatics near the seat of disease. We must use the proper caustic and use it intelligently. Of the various escharotics the author prefers Bougard's or Vienna paste, the composition of which is as follows:

℞

Wheat flour	60 grams
Starch	60 "
Arsenic	1 "
Cinnabar	5 "
Sal ammonia	5 "
Corrosive sublimate	0.50 centigrams
Sol. chloride zinc at 52	245 grams

From his work Dr. Parmenter concludes as follows:

1. The value of caustics in the treatment of malignant disease depends upon the use of proper caustics and their intelligent application in suitable cases.

2. A proper caustic is one which completely destroys and removes the malignant tissue.

3. Mild caustics are inefficient and dangerous, and therefore to be avoided.

4. Bougard's paste is the most generally useful escharotic.

5. Proper technique in application accentuates the value of caustics.

6. The suitable cases are those which have a limited extent and are easily accessible, or in other words, cancer of the skin, lip and external ear, in their incipient stages.

7. The prognosis should be most excellent, cure resulting in the vast majority of cases when treatment is early and thorough.

Small-Pox.

℞

Salicylate of soda	
Antipyrin	āā 5ij
Aq. menth. pip	f3iv
Glycerin	f3j

M. Sig.: Tablespoonful three times a day.

—*Med. Review.*

THE LIBRARY TABLE.

BOOK REVIEWS.

An International System of Electro-Therapeutics: For Students, General Practitioners and Specialists. By Horatio R. Bigelow, M. D.; and Thirty-eight Associate Editors. Thoroughly illustrated. In one large Royal Octavo volume, 1160 pages, extra cloth, $6.00 net; sheep, $7.00 net; half-Russia, $7.50 net. Philadelphia: The F. A. Davis Co., publishers, 1914 and 1916 Cherry street.

This work contains the articles of 38 different writers and represents four countries, United States, Canada, Great Britain and France, the great bulk of the writers being American. It is a notable fact that no German author appears in its pages as a contributor.

The whole field of medicine is considered with reference to electricity as a therapeutic agent, and the book is thus divided into sections, A. B. C., etc., the first being occupied with electro-physics and medical apparatus, the second with electro-physiology, etc. Each set of organs of the human body is the subject of electric treatment from the medical as well as oft-times from the surgical standpoint. With the exception of the first, the largest section of the book is the one devoted to gynæcology. It contains 234 pages and gives the electrical treatment for all the diseases of the female pelvic organs from pus tubes and extra-uterine pregnancy to disorders of menstruation. It is in this field that the electrician has engaged in bitterest conflict with the surgeon. The former does admit that there are indications for the use of the knife, but it is not likely that he will be able to persuade the general practitioner to go to the same lengths as himself in the so-called conservative treatment of diseased appendages.

In a work of this character there is of necessity considerable repetition throughout the book; and from the standpoint of a reference book, this is rather an advantage than a disadvantage, for the reader can find what he wants by consulting a single article instead of reading the book as a whole.

The book does not contain new ideas, and it is probable some of the methods there advocated are already antiquated, as must be the case in every advancing science.

It is a matter for congratulation that our knowledge of electricity in a medical sense has been collected and systematically arranged as in this work.

It will no doubt remain for years the standard book for reference on this subject, and should be in the hands of every physician interested in this branch of medicine.

The book itself is well illustrated and neatly gotten up, and does credit to the well-known firm who published it.

A Clinical Manual. By Andrew MacFarlane, A. B., M. D.

This little work contains the directions for making an examination of the urine, feces, blood, stomach contents, and some exudates and pathological fluids, and is intended as a hand-book for physicians and students examining these substances to complete a clinical diagnosis.

A Primer of Psychology and Mental Disease. By C. B. Burr, M. D., Medical Superintendent of the Eastern Michigan Asylum, etc.

In his dedication the author states that his intention was to simplify an abstruse subject, and he seems to have kept this object in view throughout the work; so that it is doubtful if any other book on this subject gives a beginner more practical information in as small space.

Essentials of Diseases of the Eye, Nose and Throat.

This is one of Saunders' series of Question Compends and is the second edition of this number.

The work is divided into two sections—Essentials of Refraction and Diseases of the Eye, by Edward Jackson, A. M., M. D.; and Essentials of Diseases of the Nose and Throat, by E. B. Gleason, S. B., M. D.; and will be found useful to students preparing for examination or for a course in a dispensary where these specialties are treated.

Essentials of Nervous Diseases and Insanity. By John C. Shaw, M. D.

This work is one of Saunders' series of Question Compends, and the second edition which has just appeared, differs from the first mainly in the correction of a few errors. While dealing with the subjects treated as fully as a book of this size could, it is intended as a preparation for the study of one of the larger text books, and as a resume for advanced students preparing for examination. List price $1.00; 48 illustrations and cuts in the text.

Human Physiology. By John Thornton, M. A. Crown 8 vo. 268 illustrations and cuts in the text. Longmans, Green & Co.

This book goes as fully into the subject as teachers in public schools, academies, etc., usually care to, the subject of reproduction and the organs concerned is carefully avoided, and the book being written in a rather easy, interesting style should find favor in the smaller schools, etc.

Essentials of Pharmacy. By Lucius E. Sayre,

is the the title of another of Saunders' Question Compends, now in its second edition. It is intended especially for students of pharmacy, follows the pharmacopœia closely, and the new edition is brought strictly up to date to correspond to the pharmacopœia of 1890.

CURRENT LITERATURE REVIEWED.

IN CHARGE OF ELLISTON J. MORRIS, M. D., AND SAMUEL M. WILSON, M. D.

VIRGINIA MEDICAL MONTHLY

for September. Dr. Bedford Brown advocates

The Cold Poultice

as a means of reducing pyrexia, when the cold bath or cold pack is undesirable or inconvenient to apply. Boiling water is slowly mixed with constant stirring, with enough flaxseed meal to make a layer a quarter of an inch or less in thickness and about eighteen by twelve or fourteen inches. This is spread uniformly over cotton cloth, covered by another layer and sprinkled with ice water until the temperature falls to 70° or 75° F. It is then applied over the abdomen and chest.

If desired a narrower poultice may be applied over the spine. The author says this acts as a prompt tonic to pulse and nervous system generally, and will reduce a high temperature almost as much as the coal tar antipyretics, and without their depressing effects.

Dr. A. R. Shands gives the result of his experience with the

Treatment of Clubfoot by Wolff's Method.

The method described is the application of rubber adhesive plaster to hold the foot in the best position obtainable at the first dressing. The malleoli and any other bony prominences are now protected by strips of cotton cloth—the whole leg up to the tuberosity of the tibia covered by a double layer of canton flannel bandage, and, finally a couple of plaster of Paris bandages are applied—the limb all this time being kept as much corrected as possible.

Next day over the prominence of greatest deformity a wedge-shaped piece of plaster is removed, two angles being connected by a linear incision around the rest of the plaster casing. The foot is now forced into a position of greater correction and another plaster roller applied (over the first) to keep it so. These incisions are most easily made with a small, fine, handsaw; the blade of which must be dipped in water frequently.

Severe excoriations are apt to result if care be not taken to exclude any fold of skin from slipping between the edges of the cut plaster bandage.

After redressing two or three times, a new dressing must be applied, and the process continued. Finally a position of over correction must be obtained, a small strip of steel incorporated in the final plaster roller, a leather boot applied over all and the apparatus worn for some months.

The author has been well satisfied with his results.

Other papers in this issue are: "Some Remarks on Epilepsy, and the Care of Epileptics on the Colony Plan," by Dr. William F. Drewery; "The Antiseptic Treatment of Infectious Diseases and their Poisonous Remedies Rendered Innocuous," by Oswald L. Schreiner, Ph. L; "Tuberculosis in Animals," by E. P. Niles, D. V. M.; "Difficulty Yet Importance of Recognizing Chancre of the Os Uteri," by Dr. H. R. Coston; "Notes on the Treatment of Diphtheria and Croup," by Dr. R. B. James; "The Prevention of Blindness," by Dr. Benjamin Lee; "Elephantiasis Arabum Cruris," by Dr. Larkin W. Glazebrook.

JOURNAL OF CUTANEOUS AND GENITO-URINARY DISEASES

Drs. J. Abbott Cantrell and Emanuel J. Stout, after quoting several authorities who state that favus may appear on parts of the body free from hair, the palms of the hands, glans penis, soles of the feet, etc., describe a case where large parts of the body were covered by lesions of this disease.

The patient was an Italian immigrant, ten years of age, five feet in height, weighing about one hundred pounds, fairly well nourished.

The whole hairy scalp was affected, the back and sides of the body, outer surface of both arms, left buttock, were affected and smaller lesions on the legs. The mouse like odor was quite noticeable, and a venereal patient on the same floor contracted the disease while this patient was in the house, although proof of direct contagion was not found.

Microscopic examination of a crust confirmed the diagnosis.

Cases reported by other authors are quoted, and the paper will be continued.

Dr. Samuel Sherwell reports a case (still living) of

Ichthyosis Congenita.

A female infant first seen when about one month old. The child was born of American parents, the father of German descent, and has a negative family history. The estimated weight at birth was two pounds, and at that time there appeared to be abnormal coating about one-quarter of an inch in thickness over the body. For about one month the only treatment was free lubrication with olive oil, and a certain amount of improvement has taken place. At first olive oil alone was used; then soft vaseline was added to this, and by gentle friction the outer casing was partially removed.

Baths containing a little borax are used, followed by inunctions, sometimes with cold cream, sometimes mutton fat, etc. The neglect of these for a single day shows very quickly in an increase of the collection on the skin.

The infant is now scarcely seven and one-half pounds in weight.

Dr. Burnside Foster proposes a

New Method of Treating Acute Gonorrhœa.

The author has not yet tried this method, but thinks an early perineal incision, with drainage of the bladder by a tube and anti-

septic irrigation of the urethra from behind offers a speedy cure with sequelæ

Although thinking the adoption of this method would elevate the standard of morals, it is proposed rather as an ideal treatment than as one likely to be eagerly accepted.

Dr. W. H. Brinley makes a

Plea for Rectal Examination in the Diagnosis of Obscure Disease of the Sexual System.

The author thinkt hemorrhoids, even when quite small, rectal ulcers, fissures, fistulæ, and papillomatæ the unsuspected cause of numerous obscure sexual disorders. The removal of hemorrhoids by any other method than excision he thinks crude and out of keeping with modern surgery.

Dr. M. B. Hartzell contributes an article, illustrated with micro photographs, on "The Prolozoalike Bodies of Herpes Zoster."

JOURNAL OF NERVOUS AND MENTAL DISEASES

for September. Dr. W. H. Riley contributes

A Study of the Temperature Sense.

In his investigations the author divided the surface of the body into fifteen areas, and came to the following conclusions. "The parts of the body given in the order of their sensibility are as follows:

1. Abdomen, sacral and lumbar regions of the spine, with the intervening space on each side of the body.
2. Inside of the thigh, chest, cervical spine, and upper dorsal spine.
3. Inside of arm, outside of thigh, lower dorsal spine, and the soles of the feet
4. Front of the neck, inside of forearm, palm of hand, inside of leg and top of foot.
5. Outside of forearm, outside of leg, and forehead.

The soles of the feet are more sensitive than the palms of the hands. The palms of the hands and the back of the hand are about equally sensitive.

Each of the fifteen different areas tested occupied a certain position of its own in the scale of sensibility to heat and to cold, and the parts that were most sensitive to heat were likewise most sensitive to cold.

In every case a temperature of one degree above the surface temperature appeared warm, while one degree below felt cold, but, at least, when test tubes are used, a slight excess of heat is less readily detected than an equally slight diminution (cold).

Water in a test tube and water into which the hand was dipped gave a sensation of cold at about the same temperature; but water at 34° C. felt warm when the hand was immersed, while in a test tube it was necessary to have a temperature of 39° C. to 41° C.

"Contrary to the opinions of Blix and Goldschneider, but in harmony with those of Dessoir, there are not two separate sets of end organs, one for heat and one for cold."

An article by Dr. V. P. Gibney describes a

Non-Operation Treatment of Metatarsalgia.

This trouble seems to be a neuralgia about the head of the metatarsal bone of the fourth toe, and the author reports cases in which he has been able to afford relief without excising the bone.

Patients suffering with this trouble instinctively remove the shoe and press the foot between the hands to obtain relief. Believing that a shoe which would imitate this procedure the author had made for some of his patients a Spanish last (a last made with a high instep) and found that shoes made on this, and fitted with a high heel extending toward the centre of the foot gave great relief to most cases.

Dr. Charles L. Dana reports a case of "Gliomatosis of the Spinal Cord and Syringomyelia with Recurrent Hemorrhages." Dr. W. A. Tomlinson writes of the "Genesis of Hallucination, Illusion and Delusion." Drs. F. X. Dercum and W. W. Keen report two cases of "Ingravescent Cerebral Hemorrhage Treated by Ligation of the Common Carotid." Dr. Livingston S. Hinckley writes of the "Difficulties which Prevent the Realization of Dr. Mitchell's Ideal Insane Hospital."

Methylene Blue in Pulmonary Tuberculosis.

Owing to the recommendation of Dr Althern, of Wiesbaden, Dr. Bronowski, of Professor Tumas's clinic in Warsaw, has employed methylene blue in eight consecutive cases, five of which were in an advanced stage. The remedy was usually given in the dose of 2 to 3 grains (in wafers) three times a day. It was tolerated well by all the patients except one, in whom it occasionally caused sickness. He found that the drug reduced the temperature, but that this effect was much less decided when there was much destruction of lung-tissue. In most cases it diminished night-sweats. In advanced cases it has no effect upon cough, expectoration, or diarrhœa. In incipient cases it may prove of benefit.—*Kansas Medical Journal.*

Benefit to Ear Patients from Nasal Treatment.

Dr. H. Gradle (*Jour. Amer. Med. Association*) says: Acute suppurative inflammation of the middle ear, if not treated has a tendency to become chronic, the tendency increasing with the age of the patient. Chronic suppuration of the middle ear rarely heals without ear treatment. Neither acute nor chronic purulent otitis is influenced by nasal treatment, but the liability to relapses after their cure is decidedly lessened by the removal of naso-pharyngeal anomalies. Acute catarrh of the middle ear will generally terminate in complete recovery under aural treatment, and sometimes even without it, provided there are no persistent nasal or pharyngeal lesions. But when these are present the disease is more likely to become chronic in spite of aural treatment, and in many cases can either not be cured, or if improved, will speedily relapse unless the normal state of the nose and throat is restored. Proliferating or adhesive disease of the middle ear is the consequence of retro-nasal catarrh, and its course is determined by the course of the disorder causing it.—*Toledo Medical Compend.*

PERISCOPE.

IN CHARGE OF WM. E. PARKE, A.M., M. D.

MEDICINE

Rheumatism in Children.

M. Jules Simon calls attention to the multiplicity and anomalies of rheumatic manifestation in children. Infantile rheumatism may attack the vertebral articulations, especially in the suboccipital region. Suboccipital arthritis is, somewhat peculiar to childhood. It must be distinguished from simple torticollis and should not be confounded with cervical Pott's disease.

The tendinous sheaths are often involved. They communicate a sense of crepitation to the finger. They feel as if they were filled with starch. The pangs of rheumatic synovitis are often mistaken for growing pains. The latter, however, are very different from those due to rheumatism. They only occur when the growth has been extremely rapid, as within a few days or weeks. Rest in bed causes them to rapidly disappear. Again their situation is very different from that of rheumatic synovitis. For instance, it is behind the knee that children complain of growing pains, while synovitis is located at the sides and in front of that joint.

The tendency to muscular atrophy is very great in children, but this atrophy readily disappears. M. Simon also indicates the frequency of rheumatic angina in children as well as certian gastric disturbances with repeated attacks of indigestion. Diarrhœa, likewise, is sometimes produced by the rheumatic diathesis. Abundant sweating is another manifestation which often depends upon rheumatism. The child's skin is always wet. He perspires profusely even when at rest or during the night. The sweats coincide with a scanty secretion of urine which is charged with urates. M. Simon does not approve of the custom of allowing children to be bare-legged. He is of the opinion that this fashion is a frequent cause of rheumatic manifestations, particularly erythema nodosum of the legs. As an abnormal localization of rheumatism the writer alludes to the occurrence of more or less painful cystitis. He quotes the case of a young girl of rheumatic taint who was attacked every time that she was chilled by a slight soreness of the throat, followed by a cystitis, which caused extreme pain and sometimes retention of urine to such a degree that it was necessary to use the catheter.—*La Medec. Mod. Med. Bulletin.*

A Premonitory Symptom of Phthisis Pulmonalis.

Destree remarks that in the course of pulmonary phthisis one often observes, without any very obvious cause, inequality of the pupils. This phenomenon is not seen in cases of apical pneumonia, or of bronchitis with emphysema, but it occurs in chronic pleurisies of old standing. It has a certain diagnostic value.

Destree made experiments on dogs and rabbits, and found that inequality of the pupils could be produced by irritation of the sympathetic in the thorax. When the nerve was stimulated in the neighborhood of the root of the lung, the pupil of the corresponding side dilated. Autopsies on tubercular subjects frequently show that the root of the lung and fibres of the pulmonary plexus are compressed and irritated by enlarged bronchial glands. Tuberculosis of the bronchial glands may therefore manifest itself by dilatation of one pupil several years before other symptoms set in.—*La France Medicale.*

Headache.

WHEN FROM NASAL STENOSIS.	WHEN FROM EYE STRAIN.
Generally unilateral.	Generally bilateral.
Frequent insomnia, often worse in the morning.	Sleeps soundly; improved after sleep.
Aggravated by physical exertion, as running, stooping, etc.	Aggravated by mental application and using the eyes.
Not subject to conjunctivitis.	Conjunctivitis after prolonged use of eyes.
Generally nasal catarrh.	Catarrh not complained of.
Excited by acute coryza.	Not subject to acute coryza.
Nose not suspected by patient.	Eyes believed to be the cause.
Dyspepsia and nausea.	Appetite and digestion good.
Astigmatic chart test negative.	Same test generally affirmative.
Pressing middle turbinated with probe increases.	Same test negative, except to cause sneezing
	Sensitive to bright light.

—*Med. Brief.*

Relation of the Pneumococcus to the Symptomatology of Pneumonia.

Numerous observers have found this microbe in various parts of the air passages in persons who were, at the time, in perfect health (*Modern Medicine*). Pasteur has discovered it in the pharnyx and neighboring cavities—the nasal fossæ, the frontal sinus, the Eustachian tube and even in the bronchi. Netter has shown it to be persistent for an indefinite time in the saliva of persons who had suffered from pneumonia and had recovered. He also frequently observed it in persons who had never suffered from the disease, finding it present in 20 per cent. of 130 healthy persons who had never suffered from pneumonia. Golding Bird found the germ present in 505 of a large number of healthy persons whom he examined, none of whom had suffered from the disease in question.

Cultures of the pneumococcous lose their virulence about the seventh day. It is also

at this date that a rapid defervesence occurs in pneumonia. The so called "crisis" of the disease corresponds with the loss of pathogenic properties of the germ.

It is also noted that the saliva of the patient, which during the development of the disease is extremely virulent, producing pneumonic infection in animals when introduced by inoculation, loses its virulence about the seventh day.

The pneumococcus rapidly loses its virulence under the influence of a temperature of 40° C. (104° F.), and loses all activity when submitted to a temperature of 42° C. This fact coincides with the loss of pathogenic properties which the microbe undergoes under the influence of the high temperature which attends the developing of stage pneumonia.

The pneumococcos does not die, however, at the critical period of the disease, but only temporarily loses its virulence, reacquiring its activity at the end of fifteen or twenty days. This reacquired violence may be retained indefinitely while the microbes reside in the mouth of the recovered patient.

Diet for Typhoid Fever.

Perhaps the best of all diets in typhoid fever is kumyss. The lactic acid which it contains will prevent the growth of the typhoid bacillus. The finely divided state of casein prevents the formation of curds. The carbonic acid is soothing to the irritated condition of the mucous membrane; the taste is grateful to the patient; the acidity stimulates the secretion of the gastric juice, and thus aids digestion—in fact it seems to fulfill all the requirements of a food specially suited to the condition of a typhoid patient or a patient suffering from any serious febrile disorder.—*Ed. Mod. Med.*

Elephantiasis Syphilitica of the Lips.

In a case described by Professor Elchhorst (*Virch. Arch.*) a man, æt. forty-three, was attacked five years after the primary affection by a peculiar, diffuse, soft swelling of the lips, producing considerable deformity. Every form of local treatment proved futile. The lower lip, however, was successfully treated with galvano cautery, but two months later swelling of the testes set in. This subsided under pot. iod. treatment. The swelling in the lips then recurred, but was gradually reduced by inunction, only to reappear again after a little time. The patient was finally discharged uncured.

Introduction of Syphilis into Europe.

According to Professor Binz (*Deutsche med. Woch.*) syphilis was undoubtedly first introduced into Europe from America, and it is to the sailors of Christopher Columbus' first expedition that we owe the "malady of France," as Shakespeare has it. Nothing pointing definitely to true syphilis can be found amongst the records of either Jews, Egyptians or Greeks, nor even the writings of the satirists of Imperial Rome. The latter, it is true, contain descriptions of gonorrhea and the local sore, but no mention is made of the sexual infection spreading over the whole body, becoming constitutional in fact. All authorities, however, agree that in 1495 lues venerea became epidemic in Europe, and subsequently spread over the whole world. Dias de Isla, a physician of Barcelona, states that the malady was imported by the companions of Columbus. During 1494 it was carried into Italy by the armies of Charles VIII, and from Italy it was spread over Europe. Oviedo and Las Casas, contemporaries of de Isla, bear confirmatory evidence.

A critical examination of the works of the authors mentioned will demonstrate their unreliability. Buret's analysis is certainly convincing, and English readers will soon have the opportunity of reading the translation.

Tuberculosis in Childhood.

Goldschmidt reports cases in which the infection was probably of intra-uterine origin. 1. In the lungs of a child aged sixteen months, there were numerous broncho-pneumonic foci and many miliary tubercles. The bronchial, mediastinal and mesenteric glands were enlarged, and the last named caseous. The other organs were intact. On the under surface of the liver, and shining through the peritoneum covering the longitudinal fissure at the entrance of the lig. teres there was a mass of the size of a pea, proved both microscopically and bactereologically to be tuberculous. 2. In the lungs of a child, aged seven months, there were numerous tuberculous nodules, some of which were partly caseous, as well as cavities varying from the size of a pea to that of a hazel nut. In one as large as a walnut, with the thinly purulent contents, tubercle bacilli were demonstrated. There were also numerous intestinal ulcers. At the entrance of the lig. teres there was also a tuberculous mass, and no other tuberculous foci were found in the liver. 3. The infant of a woman subsequently dead of advanced tuberculosis was removed from its mother immediately after birth. It died, when nine weeks old, of atrophy. Numerous large tuberculous nodules, here and there caseating, were found in both lungs, and miliary tubercles in bronchial glands, in the liver, spleen and kidneys. The mesenteric glands were caseous. The tuberculous lesions were here unquestionably of longer duration than the infant's extra-uterine life.—*British Medical Journal.*

Methyl-Blue for Epitheliomata of the Face.

M. Darier reports favorably of this treatment, which he has employed successfully in a series of nine cases. In superficial cases he touches the diseased surface once daily with a 1-to-20 solution. Preliminary cauterization hastens the cure. The drug seems to have a specific action upon the cancerous tissue. If the tumor is deeply seated he uses hypodermatic injections, and if there is extended ulceration skin-grafting is recommended.—*La Tribune Medicale.*

Trional in Delirium Tremens.

Dr. Russell Bellamy, in treating ten cases of delirium tremens with trional, a new hypnotic, records the results of his work in the *New York Medical Journal*, as follows:

1. Delirium was controlled with greater rapidity and safety by trional than by other hypnotics.
2. In the majority of cases a marked stimulant effect was observed, possibly on account of the methylic and ethylic elements which enter into the composition of the drug.
3. On account of the low temperature noted in all cases, trional must possess antipyretic properties, thereby simulating its allies of the phenol group.
4. It was always well borne by the stomach, and in one case was rapidly absorbed when administered per rectum.
5. No unpleasant after-effects were observed, and in all cases, except one, and a tuberculosis complication, recovery was very speedy.—*Maryland Medical Journal.*

Self-Infection in Child Bed.

F. Ahlfeld, in a paper published in the *Zeitschrift f. Geb. und Gyn.*, reaches the following conclusions:

1. The occurrence of fever in child bed, originating without previous examination, cannot longer be doubted.
2. These fevers are, for the most part, unimportant, though severe and even fatal cases are probable.
3. In well-conducted institutions the number of fever cases resulting from self-infection in child-bed is larger than those caused by infection from without. The latter, however, are usually of a severer type.
4. The percentage of morbidity and mortality in an institution in which due care is taken to prevent infection from without, depends on separating the primiparæ from the multiparæ and on the number of operative cases.
5. Preliminary disinfection of the birth canal is an important prophylactic measure.
6. Sublimate remains the best disinfectant.
7. The seat of infection is generally not the external genitals, but rather the cervix and endometrium.
8. Most fever cases in child-bed are to be considered as resorption fever. They result principally from retention of the infectious child bed secretions.
9. The seat of most active absorption is the uterine mucosa; next that of the vagina.
10. The poison taken up is, as a rule, promptly eliminated—probably through the urine.
11. Pathogenic microorganisms are always to be found in the vagina. They need only a favorable culture medium to develop their activity. This they find in the decomposing contents of the vagina and uterus after labor. *Brooklyn Medical Journal.*

The Influence of Oophorectomy on the Voice.

According to an account given in the *Progres medical* for May 5, Dr. Moure, of Bordeaux, stated at a recent meeting of the *Societe francaise d otologie* that in two women who had undergone this operation he had observed that the voice had become strong and coarse. One of them, who had originally had a soprano voice, had lost her high notes and almost become a contralto. The laryngoscopical examination had not shown any anomaly of the vocal organs. Dr. Moure asked if such disturbances of the voice might not be attributed to elongation of the vocal bands or to a more considerable development of the thyroid cartilage.—*N. Y. Medical Journal.*

Tight Lacing and Gallstones.

Prof Marchand, of Marburg, a few years ago called attention in the *Deutsche Medicinische Wochenschrift* to the fact that gallstones and tight-lacing are frequent coincidents. According to Dr. Marchand, the relation of tight-lacing to the development of gallstones is rendered very clear by noticing the situation of the gall ducts in the liver deformed by tight-lacing. The furrow caused by lacing runs directly across the right lobe of the liver, as the result of which there is a tendency to atrophy of the gall bladder. When tight-lacing has been practiced to an extreme degree, an artificial fissure is formed in the liver, giving rise to what is term the "lacing-lobe," which carries with it the gall bladder. The constricted portion of the liver is found to be just at the point of junction of the gall bladder with its duct. In these cases, according to Professor Marchand, it is common to find the gall bladder greatly distended, extending far beyond the border of the liver, and frequently an examination made post-mortem reveals the presence of gallstones.

Stagnation of the bile is well known to be one of the most important causes of the formation of gallstones. A change in the composition of the bile, from catarrh resulting from congestion of the mucous mebrane and the thickening of the bile due to failure of the gall bladder to completely evacuate itself, gives rise to the formation of small masses which serve as nuclei for calculi; hence anything which obstructs the free outflow of bile through the cystic duct, must favor formation of gallstones.

Marchand is also of the opinion that many cases of cancer of the liver should be attributed to tight-lacing. It is only a few years since Langenbuch was obliged to open an abdomen to remove a "lacing lobe" of the liver which had been so completely separated from the rest of the organ as to cause its death, rendering its removal necessary.

In view of such facts as these, is it not the duty of every physician to take special pains to warn his patients against the evil effect of this pernicious practice? Few women are conscious of the fact that they are injuring themselves by tight-lacing, and yet at least ninety-nine out of every one hundred women in the United States are addicted to this evil practice in some degree.—*Ed. Modern Medicine.*

SURGERY.

Landmarks of the Digestive Tract.

Dr. F. B. Robinson (*Mathew's Medical Quarterly*) says:

1. The sigmoid flexure is a very apt location for disease to arise. In dissecting infant cadavers I find the sigmoid very long and often lying in the right iliac fossa. In one infant, about six months old, I found a volvulus of the enormous sigmoid. The sigmoid and rectum are inseparable. In the sigmoid 60 per cent of volvulus occur, and men have volvulus four times as often as women. I was unable to produce a permanent volvulus in experimental works on dogs' bowels. When I stitched it the volvulus would unwind, tear out the stitches or lengthen the pedicle. The cause of volvulus is (*a*) fatless, (*b*) elongated mesentery, and (*c*) a history of constipation.

The peculiar disease to which the sigmoid is liable is stricture (malignant or nonmalignant.) Seventy per cent of strictures of the large bowel occur in the descending colon; and this would give a large number to the sigmoid, as the sigmoid is some fifteen inches long, and the descending colon proper is only eight inches long. No doubt the frequent stricture of the sigmoid is due to (*a*) the sharp and hard foreign bodies which lie on the surface of hard fæces, aud (*b*) the mechanical difficulty of passing through the long, curved gut. A curious feature about man is the sigmoid curve and the rectal ampulla, which must represent some ancient evolutionary stage. A peculiar feature I have long noted in autopsies is that the sigmoid and descending colon are frequently more contracted than the other portions of the large bowel.

2 The splenic flexure of the colon is peculiar from being the most fixed and most acute flexure of the digestive tract. It is held firmly in position by the costo-colic ligament. The sharpness of the bend in the colon at the spleen offers considerable mechanical difficulties to the passage of hard fæces, and this accounts for both malignant and nonmalignant srtictures at this point.

Rough, hard fæces wound mueous membrane and allow infection to travel through the gut-wall into the peritoneum, and this wound kept constantly irritated results in inflammation or malignant growths. The inflammatory products organize into connective tissue, ending in contraction or stricture. Tumors and strictures are difficult to diagnose in the splenic flexure, as they are very high under the ribs, and in laparotomy for intestinal obstruction are often overlooked.

3. The hepatic flexure does not give rise to much intestinal disease. It is not an acute flexure, but possesses a very large angle. Its main difficulty is that it is near the gallbladder, which frequently gives rise to inflammation, and it spreads to the hepatic flexure. It is held to the liver by the hepatocolic ligament. Besides being an obtuse flexure, the fæces are not so solid as they are in the splenic and sigmoid flexures.—*American Lancet.*

Iodoform Oil in Tuberculous Joints.

De Vos (*Centlblt. f. Chirurg.; Am. Med. Bull.*) recommends, after repeated experiments on the cadaver, the following as the points of election for injecting the various joints:

1. SHOULDER.—The arm is adducted, the forearm being bent at the right angle across the abdomen, and the needle is introduced one centimeter behind and below the tip of the acromion process.

2. ELBOW.—A point on the outer side of the olecranon, the needle going in between this process, the radial head and the capitellum humeri.

3. WRIST.—On the radical side of the dorsal edge of the styloid process; on the ulnar side at upper edge of the pisiform bone.

4. HIP.—A line is drawn from a point the breadth of the patient's thumb external to half way the distance from the anterior superior spine of the ilium to the pubic spine. From this point another is drawn to the outer edge of the trochanter major. At the junction of the outer and second fourths of this line the needle is introduced, provided the limb is extended, the foot vertical and the trochanter in its normal relation to Nelaton's test line.

5. KNEE—On the angle between the upper edge of the tibia and the ligamentum patellæ.

6. ANKLE.—Immediately in front of the tip of the external malleolus, the needle being pushed between the astragalus and the malleolus.

Injections are to be made very slowly, not more than 10 cm. in five minutes. As to the dose, one gramme of iodoform (10 per cent. to 20 per cent. emulsion) is sufficient for adults to begin with. This is repeated in a week if no reaction follows, and then every fourteen to twenty one days, the iodine in the urine and persisting tender points being the guide.

In the after-treatment massage and passive motion are to be avoided, but moderate active movements are allowable. Several cases of intoxication were observed. Iodoform oil is considered far preferable to conbinations of the drug with ether or glycerine. The duration of treatment varied from 9 to 325 days, the injections from one to twenty, and, as a result, 72 per cent. were cured, the ultimate results being better than those following erasion or resection.

Intestinal Indigestion with Fermentation.

℞

Salol.....	ʒj
Pancreatin.....	gr. xl
Oleoresin capsici	mxx

M. ft. in pil. no. 20.

—*Therapeutic Gazette.*

Ingrowing of Nail.

Ingrowing nail, or *ongle incarne*, as the French call it, is, as is well known, a very painful affection, and unfortunately the operation necessary for its cure is often dreaded by the patients, although local and general anesthetics are employed to render the avulsion as painless as possible. A very simple method has been frequently employed by a

confrere with constant success. It consists in painting the offending portion of the nail with a warmed 40 per cent. solution of caustic potash. In a few seconds the upper horny layer is rendered so soft that it can be easily removed by a piece of broken glass used as a scraper. The application of the solution and scraping are continued until nothing but an exceedingly thin portion of the nail remains, which can be easily removed by a small scissors. The patient can now be considered as cured, without having lost a drop of blood nor felt any pain.—*Paris Cor. Medical Press and Circular.*

Nerve Suturing.

Dr. De Forest Willard (*International Medical Magazine*) says:

Functional restoration is possible.

The closer the apposition the more speedy and complete will be the restoration.

Union is accomplished chiefly by the reaching out and development of nerve fibres from the divided proximal end, these fibres pushing their way across the connecting link of fibrous tissue. The fan-like projection of these fibres is marked in each case.

Engrafted nerve-tissue or flaps cut from the nerve may serve as a framework for new tissue, or may produce embryonic nerve-fibres capable of assisting in reunion.

ARMY AND NAVY.

CHANGES IN THE U. S. ARMY FROM SEPTEMBER 9, 1894, TO SEPTEMBER 23, 1894.

Leave of absence for twenty days, to take effect upon the arrival at Fort Schuyler of a medical officer to relieve him, is granted to Captain W. W. Gray, Assistant Surgeon.

Major Peter J. A. Cleary, Surgeon, is relieved from duty at Fort McPherson, Ga., to take effect upon the expiration of his present leave of absence and ordered to Fort Brown, Texas, for duty, relieving Captain William B. Davis, Assistant Surgeon. Captain Davis, upon being relieved by Major Cleary, will report for duty at Fort Brady, Mich., relieving Captain Paul Clendenin, Assistant Surgeon. Captain Clendenin, upon being relieved by Captain Davis, will report for duty at Fort Warren, Mass.

So much of the ordinary leave granted First Lieutenant William F. Lippitt, Assistant Surgeon, as is embraced in the period from August 10 to September 25, 1894, is changed to leave of absence on Surgeon's certificate of disability.

Major Charles Smart, Surgeon, and Captain Harry O. Perley, Assistant Surgeon, are detailed as delegates to represent the Medical Department of the Army at the twenty-second meeting of the American Public Health Association to be held at Montreal, Canada, September 25th to 28th, 1894.

Leave of absence for one month, to take effect after termination of present field duty at Raton, N. M., is granted Major James P. Kimball, Surgeon U. S. Army.

Captain Charles E. Woodruff, Assistant Surgeon, is relieved from duty at Fort Assiniboine, Montana, and ordered to Fort Sheridan, Ills, for duty, relieving Captain Francis J. Ives, Assistant Surgeon.

Captain Ives, on being relieved by Captain Woodruff is ordered to Plattsburg Barracks, N. Y. for duty, relieving Captain Harry O. Perley, Assistant Surgeon.

Captain Perley, on being relieved by Captain Ives, ordered to Baltimore, Md. for duty as Attending Surgeon, and Examiner of Recruits, relieving Captain Louis W. Crampton, Assistant Surgeon.

Captain Crampton, on being relieved by Captain Perley is ordered to Fort Meade, South Dakota, for duty.

Captain Edward C. Carter. Assistant Surgeon, is relieved from duty at Vancouver Barracks, Washington, and ordered to Fort Buford, South Dakota, for duty, relieving Captain Aaron H. Appel, Assistant Surgeon.

Captain Appel, upon being relieved by Captain Carter will proceed without delay to Fort Ethan Allen, Vermont, and report for duty at that post.

The leave of absence for seven days granted Captain C. N. B. Macauley, Assistant Surgeon, is extended twenty three days.

Leave of absence for twenty-one days, to take effect about September 20. 1894 is granted Captain William. P. Kendall, Assistant Surgeon.

The leave of absence for seven days, granted Captain Louis Brechemin, Assistant Surgeon, is extended twenty three days.

Leave of absence for one month is granted Major Henry M. Cronkhite, Surgeon.

NEWS AND MISCELLANY.

Twenty-Fifth Annual Session of the Medical Society of Virginia to be Held in Richmoud, Va., Beginning October 23d, 1894.

First meeting at 8 P. M., Tuesday, October 23d, 1894, in Hall of Y. M. C. Association, Main and Sixth streets. Fellows, delegates and members by invitation must register their attendance at the registration desk in the hall of meeting.

All subsequent meetings of the Session will be held in the Hall of the Chamber of Commerce, Main and Ninth streets

The Medical Examining Board of Virginia as at present constituted, will hold its last session for examination of candidates for license to practice in Virginia in the Hall of the House of Delegates, beginning *promptly* at 9 A. M. Tuesday, October 23d, 1894. The board itself will meet in the same Hall at 8 P. M. Monday, October 22d, for business. All letters with reference to this board, and the examinations should be addressed to the secretary of the board, Dr. Benjamin Harrison, Franklin and Seventh streets, Richmond, Va.

LANDON B. EDWARDS. M. D.
Recording Secretary, etc. (for executive committee).

Richmond, Va., 22d, 1894.

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ORIGINAL ARTICLES.

THE CARE OF PREGNANT WOMEN.*

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The study of the diseases and difficulties encountered with a state of pregnancy and parturition, though highly interesting and having at all times attracted the greatest attention of physicians, is, however, exceedingly difficult. This circumstance probably atones for the fact that our obstetrical literature still continues to be full of errors. By consulting the best practical writers, missionaries, and travelers, the revelation comes that it is among the higher classes in the more civilized countries—Europe and North America—that women suffer the greater in both pregnancy and parturition; but that the women of the peasantry and the savage are comparatively exempt. We may therefore very naturally and wisely conclude that it is unnatural for civilized woman to suffer so universally as she does to-day; and that civilization in disobedience to the law of Nature, is the true cause of her present suffering during gestation and childbirth.

It is ignorance, as well as carelessness and viciousness, that has brought about the existing abnormal condition of civilized women. Thus, through unwholesome civilization have come fixed habits of excesses; and if excesses must be indulged, evil consequences will follow and must be endured; for Nature's law would have to be changed before they could be either prevented or banished by any method of treatment. It follows, then, as a natural consequence that to prevent these sufferings will depend, not so much on treatment by application or administration of therapeutic agents, as on the successful education and training of these women, so that they will learn to know how to—and will actually—cultivate the necessary self-discipline requisite to enable them to prevent the continuous irritation from excesses in their modes and habits of life. If the writer's observations have been correct and unprejudiced, it seems that a revival of learning in obstetric science must needs be instituted among us, destined to find the true cause or causes of the unnatural and needless suffering of civilized women. The progress of obstetrics in the immediate future must be made through the knowledge that will be wrought out by the devotees of biology. Thus, we shall find our way, on positive ground back through the morphology of organs, tissues, cells and blood, to a clear comprehension of the origin of vital activity in protoplasm and the pabulum which sustains it. This is the only way open for us into the primitive arcana of nature, if we would have the wisdom essential to intelligently inculcate that regimen which will sucessfully prevent the needless sufferings of pregnant and parturient women.

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The future distinction of obstetric science can obtain only by an advanced study of human biology. When this truth is propounded, there opens before the thinking mind a vista so transcending all ordinary limitations of obstetrical knowledge, as requires such genius and expansion of the mental eye in order to embrace it in its simplicity as scarce yet obtains. It remains, then, for our guild, to endeavor by rigid scientific investigation through advanced biologic studies, to make patent the causes of the sufferings of pregnant and parturient women, and to determine exact measures for emasculating these causes, or for neutralizing their effects whenever they have eluded detection or escaped emasculation. Thus, by directing our studies chiefly in relation to etiology and diagnosis, and having learned to know the true cause it will become easy to intelligently establish prevention; while, with a correct diagnosis, treatment will become easy.

I verily believe that the next coming great advance in this, our special branch of medical science, will be in our bringing home to the general practitioner the fact that the diseases peculiar to women during pregnancy and parturition are very largely preventable; to make him feel his responsibility, both as to their production after the present generally prevailing methods of practice, and also as to the possibilities of their prevention after improved methods. The family physician must be fully aroused to the conscious realization of the fact that it lies within his power very largely to prevent many of the diseases among the women of the families intrusted to his care. When this obtains, his moral obligation will impel him to promptly do his full duty, by giving adequate instructions concerning the ill effects of improper posture, dress, food, drink, and erroneous habits of living, including the non-forbearance of indiscriminate, excessive and impure sensual indulgences. Then it will come to pass that the wholesome forbearance of coitus during the entire period of gestation, the puerperium, and three months thereafter, will be insisted upon; together with correct posturing and dressing, proper food and drink, and healthful habits of living. Aseptic accouchments will be faithfully and efficiently practiced; lacerations of the cervix and perineum will be more frequently prevented, and when they do unavoidably occur will be early repaired; rectal and vesical troubles will be corrected in due season; gonorrhea and syphilis will be also more frequently prevented, and when encountered will be more vigorously treated and kept under surveillance until all discharge and sequela are arrested. And, what will be of far greater benefit to mankind, there will be given the requisite attention to the growing girls, with special care about the years of puberty, that more vigorous bodies and more normal reproductive organs be developed. A positive, clear and convincing protest will be made against the present unwholesome state of society which is now urging our girls on to a degree of emasculated physical corruption, by luxurious indolence, deleterious dress and sensual excess, and superbly fits them to live in communities by themselves—in women's hotels—whereby they become ruined for wifely companionship and sturdy maternity. When that day comes —as I verily believe it to be within the province of our intelligence to successfully inculcate—then, and not until then, may we hope to find that the prevalence of diseases among civilized women will cease to be a reproach to preventive medicine. Then will authors and teachers find it necessary to discontinue defining woman as "an animal with a constipated bowel and a pain in her side."

But as yet, at present we are compelled to meet the situation as we find it. The condition of the suffering of the civilized women of the present generation, however grossly unnatural it has been cultivated, must needs have our most careful attention and require our wisest judgment, lest we fail to institute proper treatment for their relief. In the care of pregnant women much of great importance devolves upon the obstetrician, with regard to safely conducting the mother through the period of gestation, parturition, and the puerperium; the preservation of the life and healthful condition of the child; and his own reputation. The diseases of pregnancy unquestionably is a field only partially and imperfectly explored. When we take into consideration how much of accident might be avoided and how much real good done to this class of suffering women by proper care, it places us at a loss to account for the fact that ob-

stetricians have hitherto neglected their duties, by signally manifesting a want of endeavor to promote the advance of obstetric science, in a direction quite worthy of the profoundest investigation. It is a noteworthy fact that the conditions which beget the disorders of pregnancy are not thoroughly treated by any of the standard works upon obstetrics. We are so busy thinking, discussing, defending, inquiring, practicing and teaching about the better modes of alleviating human suffering that we have no time and no leisure of mind for quiet contemplation, to allow the exercise of the intellect to feed upon Nature's truth, without which it is impossible to obtain a clear knowledge of the real causes and how to successfully prevent them. Communion with Nature was never more needful than now. Feverish activity rules all spheres of life. Medical effort is multiplied and systematized beyond all precedent. And all these things make calm fellowship with Nature hard to compass. We can conquer Nature only by obeying her laws, and in order to obey those laws we must first learn what they are.

For the convenience of our consideration, the paramount duties of the obstetrician in the study and care of pregnant women may be classified as follows:

1. To discover if the patient be actually pregnant.

2. To determine positively if the impregnation be uterine or normal, as contradistinguished from tubal, abdominal, or abnormal pregnancy.

3. To carefully note the pregnant woman's history, including her age, primiparity or multiparity, environments, station in life, general condition of health, period of gestation; as well as her dress, food, drink, and habits of life. To make repeated examinations of the urine and ascertain the temperature, from the time pregnancy is established to the termination of gestation.

4. To make a physical examination for the purpose of accurately determining the diameters of the pelvic straits; the symmetry and size of the bony outlet; the integrity, condition, and position of the vagina, uterus, and other inter-pelvic viscera and adjacent structures; the state of the abdominal muscles; the presence or absence of hernia, varicose veins, tumors, etc.; the shape, size and condition of the breasts and nipples; the condition of the heart, lungs, mind, stomach, bowels, etc.

5. To observe the state of the fetus, its strength and viability, as well as the implantation of the placenta.

These must all be included in the search for intelligent guidance as to how the proper management of the pregnant woman should be conducted. With regard to the first, all experienced observers have found that psychologic phenomena often call for an intimate study and wise differentiation of every form of hallucination, delusion, illusion, as well as the deilrium of cerebral hyperemia, or the frenzy of the maniac, from toxemia and eccentric irritabilities. And, that such abnormal conditions frequently exist unrecognized, and so continue until they eventually establish their peculiar fixed impress upon the mind and nervous system. Thus when the paranoiac woman simulated pregnancy, and even parturition, she deceived the better judgment of some of the most skilled obstetricians. Pseudocyesis and pseudotocia are recognized abnormal conditions, which so closely resemble the normal condition of pregnancy, and the beginning of parturition, as to demand our highest discriminative faculties in arriving at an intelligently correct diagnosis.

As to the second, it remains a simple self-evident fact that it should always be positively determined whether the impregnation be uterine or extra-uterine. How to intelligently differentiate normal or uterine from abdominal pregnancy, time forbids to discuss fully in this connection; suffice to say that it may be made by careful palpation of the abdominal parieties, together with vaginal and rectal digital examination and proper posturing. Paracyesis and interstitial or cornuate fetation are purposely omitted, as such accidents can scarce be diagnosed at a sufficiently early period of gestation to be of actual benefit. Abnormal implantation of the fetus constitutes a most important class of cases with which the accoucheur has to contend. Extra uterine or tubal pregnancy is rarely suspected until after certain dangerous and distinct symptoms are manifested, chiefly because no opportunity is had to discover it. These symptoms are such as follow rupture of the cyst containing the embryo with intra-

pelvic, or interperitoneal hemorrhage and shock; as sudden seizure of violent agonizing pain in the lower abdomen, fainting, pale, or anemic surface of the body, cold clammy skin, rapid and almost imperceptible pulse, sighing respiration, etc. Whenever extra-uterine fetation is discovered, either before or after the rupture of the cyst, the question of treatment is a very grave one. But experience teaches us that this truly marvelous and murderous condition admits of only one line of action to be followed with any degree of ultimate safety to the life of the pregnant woman. Section must be done. No other line of treatment that has been advanced is so rational and certain in the ultimate saving of life as abdominal section. The perfected technique, as we have it today, makes it a safe procedure. We must, however, bear well in mind what experience also teaches us, namely: that when the placenta is found still in the tubal sac it is best to enucleate and remove all—the tubal sac and ovary; but that whenever the placenta is found partially or wholly out of the tubal sac and adherent to the peritoneum, bowel, etc., and still alive, the very best that can be done is to let it alone—to keep hands off. In these cases the ultimate safety of the patient lies in removal of the fetus, cleaning out the peritoneum of blood clots and all other *débris*, ligating the bleeding vessels, pack with iodoform gauze, and treat as an open wound; thus allowing the placenta to come away in due course of time by suppuration. We can thus guard against sepsis by drainage and cleanse out the cavity as fast as putrescence develops. My most venerable friend and classmate at the University of Pennsylvania, Dr. Joseph Price, than whose experience in these cases there is none more extended and successful, and consequently deserves to be accepted as reliable authority, says: "All other lines of treatment that have been advocated fall into insignificance with this manner of managing these cases." He also claims this is a summer disease or accident, being in his experience almost always found only during the summer months; when May comes he looks for extra-uterine pregnancy cases.

The third brings us thoughtfully to consider the influences of those conditions which have been hitherto so grossly neglected, but which demand a decided and determined prophylaxis. The unprecedentedly rapid progress of civilization in disobedience to the law of Nature, as evidenced by the accumulation of wealth on one hand and extreme poverty on the other; the forcing or cramming system of intellectual education with lack of requisite physical training; the custom of unwholesome food and drink; deteriorating fashions of dress and habits of society; unbridled sensual indulgences; and the woful endeavor to equalize the duties of women with those of men, have within the last generation very much deteriorated the child-bearing capacity of civilized women. True, the standard of female beauty is increasing, and decided intellectual growth manifested by women in all departments of science and art; but, in the same ratio do we find the remote dangers as well as the immediate accidents of gestation and child-birth have increased. Hence, we find that flaccidity of the abdominal, spinal and pelvic supports; chronicity of the shattered exotic nervous systems; abnormal state of the ovaries; subinvolution of the uterus, etc., have marvelously increased in later years, notwithstanding the much-vaunted so-called hygienic advances in improved habits of living and reform in dress. These unnatural conditions are most prevalent among the residents of our cities, and increase from bad to worse as we go from the smaller to the larger and more crowded marts in civilization. They are as prolific sources of chloro-anemias, trophic-nerve paresis, hydremias, hyperemias, and prostrations during pregnancy among the women of wealth, ultra-refinement and excessive culture, as are those women who are subjected to the privations and hardships of extreme poverty. The remarkable fact in history being that there has been a proportionate increase of these conditions among the women of these two extremes of life, whereas the reverse holds good with women who belong to a middle class and are comparatively free from the unnatural behests of modern civilized society, or of irremediable poverty. The pregnant woman whose parentage, as well as herself, has been untrammeled with the deleterious impress of either of these two extremes in life, will terminate her gestation and parturition with much less suffering, and more healthful to herself and her offspring, than will her more unfortu-

nate sister who comes from a stock reared in the excesses of indolence, luxury or poverty. The pregnancies of too early, as well as of too late, marriages are alike to be apprehended as fraught with unnatural conditions. The girl who enters the matrimonial state at the nubile period, from 18 to 20 years of age, will approach the marriage couch with a much better prospect of wholesome fruition, healthy to herself and offspring, than will she who enters the nuptial relationship earlier, under the turbulence of puberty, immature physical development, and illy formulated morale, amid the storm-waves of exalted nerve tensions superinduced by over-taxed educational training, and undue stress of unwholesome fashion and society; or, than she who marries late, say after 28 years of age, who still retains all the productive elements but which have been debilitated by repeated disappointments, now leave her with the elasticity and resiliency of youth—the regulating factors in all growths—defective, and the newly stimulated energies of a life somewhat wasted are revived in a physical organism unfitted for the reproductive process. The ovaries and uterus may properly perform their respective normal functions from puberty to the menopause, but it must be remembered that an opportune impregnation is requisite to preserve woman, if not rosy and plump, at least elastic and buoyant; that her maternity may be exempt from pelvic indolence, so typically manifested by the flattened chest, the wrinkled face, and some fixed cultivated hobby—to save the rosy-cheeked maiden of 20 from shriveling into the parchment-skinned spinster of 40, by timely desuetude of celibacy. The primaparity or multiparity of the patient also demands its quota of consideration in the etiology of the diseases of pregnancy. The influences of heritage, personal habits, station in life and environments, usually make up the requisite field for the consideration in the primapara; whereas, in the multipara we find it essential to also look well after such conditions as the subinvolution of the uterus, lacerations of the cervix or perineum, tumors, and defective pelvic, abdominal and spinal support, as they often lead to abortion or to direct dangers during parturition.

The thoughtful obstetrician will, with inexorable discipline, advise his patient as to the requisite *régime*. The consciousness of his full duty will impel him to insist upon:

1. Absolute, regular hours and wholesome environment.

2. Plain but nutritious and wholesome food and drink, being principally composed of fresh lean meats, fresh fruits, pure milk, and distilled water.

3. A proper amount of exercise, by walking or light labor on foot and maintaining the correct erect posture. Whenever infirmity forbids such exercise, recourse should be had to massage, and as much time passed in the open air as is advisable under such unfortunate circumstances. Rest in the recumbent posture after meals and fatiguing efforts, with not less than ten hours sleep out of every twenty-four.

4. An open condition of the bowels and skin, which is to be chiefly maintained by proper diet, exercise and bathing, the wearing of flannels, warm low-heeled shoes and loose garments, and, in rare cases, the proper use of laxatives, and hot-water enemas.

It, however, not infrequently falls to our lot to have placed under our care pregnant women who belong to the poorer and less favored class, exposed to too much labor, privation of proper food, dress, and shelter; with whom we find ourselves confronted with the question for bettering their diet, dress and habitation, which assumes such proportions that demand our assistance, not only as medical men, but also as philanthropists. Fortunately the advantages which the many charities afford enable us to give this class much benefit in every way, save when mental anguish and nostalgia become irremediable factors, in the production of depressing influences which bar the healthful action of the resources at our command. With regard to repeated examinations of the urine and noting the temperature, it suffices to say that as are the urine and temperature so are, very largely, the prognosis and treatment prior to parturition. Urinalysis and thermometry are simple in detail, yet how prolific of averting the culmination of conditions very hazardous to both mother and child. Conditions which otherwise are frequently discovered only by the appearance of anasarca of the inferior extremities, edema of the face or lungs, or a seizure of eclampsia, after which attention

is given to these searching steps, but often too late to be of any value in devising a prophylaxis. This very naturally raises the question, Is there a prophylaxis for the albuminuria of parenchymatous nephritis during pregnancy and consequently the avoidance of eclampsia prior to or during parturition? The experience of an earnest rational endeavor in a limited number of cases warrants the opinion that very much may be done in this direction. So, also, with regard to the prophylaxis of parturial sepsis, which is a problem of equally great magnitude. True, sporadic cases of so-called puerperal fever (parturial sepsis) as well as of eclampsia, etc., ensue in spite of all possible efforts, but it is the writer's firm conviction that these murderous complications can and will be prevented by timely precaution and by banishing every factor in their production. Preparatory hygienic regulations, antisepsis and quarantining will as surely save the mothers from these complications as absolute cleanliness at parturition will save the child from ophthalmia neonatorum.

In proof of this, it is needless to confine reference to personal experience in private practice, for in addition we find the maternities likewise furnish abundant evidence in support of this declaration. Here we may cite, as the most striking example, the indefatigable labors of our eminent Fellow Dr. Joseph Price, in his connection with the Preston Retreat at Philadelphia, whereby both that institution and himself have become renowned, in establishing this fact beyond all doubt or cavil, that these complications can be prevented.

A word with regard to the term puerperal fever, which is misleading and fails to express the condition it is intended to imply. It should therefore be expunged from our literature and be replaced by the proper term, *parturial sepsis*. Parturial sepsis is a surgical sepsis, arising from the conditions in which women are found during the extrusion of the uterine contents, similar to those during surgical procedures. The same classes of septic infection and septic poisoning occur in the non-pregnant state, during operations upon the pelvic viscera done without due regard to absolute cleanliness, and in hospitals where patients are crowded together with want of proper sanitation. Facts, as numerous as can be collected in any department of medicine, prove conclusively that the infection and contagion of sepsis, non-specific and variable as they are, can be conveyed by the nurse or attendant as well as by the accoucheur, and thus may likewise poison patient after patient until they also, as well as the accoucheur, either discontinue their labors or subject themselves to the most rigid discipline of absolute cleanliness and sanitary environment. When this prophylaxis obtains, then will parturial blood poisoning cease to be among the cases intrusted to their care, and they will find themselves rewarded with a mortality of *nil* from sepsis. It is very clear to the writer that the more carefully we study and practice obstetrics on sound surgical principles, the better success will we obtain. This, above all else, will secure a thorough preparation of the vagina, that the child may make its exit into the world through a clean channel, which will insure safety to both mother and child. And again, if the forceps or the hand should be required, if laceration of the cervix or perineum should occur, the patient will then have the healthful benefit of the same preparation as is given for surgical procedure. A word also with regard to finding ourselves summoned during the latter period of pregnancy, or at the approach of parturition, to attend one who is suffering from or threatened with eclampsia, and the patient suffering chiefly from vascular excitement, I should feel it as much my duty to bleed, as I should to clean out the endometrium whenever parturial sepsis was found to be due to the retention of infected decomposing portions of the secundines. While, if the patient under like condition belonged to the more rare class of anemic cases, I should hope to happily correct the disorder by chloroformation, hot water, the hypodermatic use of morphin and atropin, veratrum viride, etc.

Under the fourth head of the subdivision of this subject, it may be remarked that pelvimetry is an equally essential requisite with urinalysis and thermometry. Deviations from the normal symmetrical pelvis, the diameters of the pelvic straits and the inclination of the bony excavation, exercise marked influences in proportion to the degree that they exist. In an abnormally broad capacious pelvis, with obliquity lessened and supports relaxed, we find that in the earlier period of gestation

the tendency is to misplacement of the gravid uterus, either forward or backward and downward, from gravitation in consequence of increased weight. These abnormal uterine positions are usually manifested early by bladder or rectal difficulties with bearing down or pressure in the pelvis, and a dragging sensation from the lumbo-sacral region, etc. The functions of the intra-pelvic nerves, blood vessels and lymphatics being interfered with, we find in a proportionate degree that there is produced a stasis in the venous, vaginal, uterine and rectal plexuses, and consequent dilation of both these vessels and the lymphatics. Thus we have produced a hyperemic state of the entire pelvic circulation resulting in edema primarily, followed by ecchymosa of the peri-vascular, peri-lymphatic, and other cellular tissues, to be succeeded later by varix of the vulval, vaginal, uterine and hemorrhoidal venus plexuses, and consequent trophic nerve changes. It is a noteworthy fact that in these cases there is almost invariably found a want of the correct erect posture. The woman, herself, unconsciously increases the aforesaid difficulties by assuming a more or less stooping posture, in her endeavor to make herself comfortable from the dragging sensation below. Thus we find the abdominal and spinal muscles relaxed, the lumbo-sacral spine receding behind its normal axis-perpendicular with ear, shoulder, hip and ankle—the weight of the superior trunk gravitation back of this normal axis and falling perpendicularly behind the heads of the femurs; whereby the pelvis is swung upon the femur heads from an oblique to a more or less transverse position, while the superincumbent weight of the abdominal and thoracic viscera, instead of being directed forward, by the normally advancing lumbo-sacral spine and supported upon the pubes and lower portion of the abdominal muscles, now falls directly within the basin of the pelvis, exerting its injurious effects upon the contents thereof. The real causes of these conditions being thus clearly revealed, the treatment becomes very simple. This consists in first reëstablishing and maintaining the correct erect posture, thereby securing the normal obliquity of the pelvis by advancing the lumbo-sacral spine in its normal axis of the body. The superincumbent weight of the abdominal and thoracic viscera is then again directed to normally gravitate upon the pubes and lower border of the abdominal muscles, and at the same time there is afforded the normal shelter to the pelvic contents below and behind the promontory of the sacrum. Experience has established the fact that the correct erect posture in these cases is secured and maintained the more effectually by virtue of proper external support. The external support which fulfills this purpose the better is one fully detailed by the writer in a paper read before the International Congress of Gynecology and Obstetrics, at Brussels, Belgium, September, 1892. (This support is manufactured by the Natural-Body Brace Company, Salina, Kan.) The normal equipoise of the superior trunk upon the lumbo-sacral spinal axis having been thus restored, whereby the evil influences from the weight adove as a prime causative factor in intra-pelvic disturbances are happily overcome, there remains but attention to be given to the insignificant weight of the misplaced pregnant womb itself. This is usually easily corrected, when free from adhesions, by proper posturing, and afterward maintained by proper internal support with some pessary suitably fitted to the case.

When, on the other hand, the pelvis is abnormally distorted or contracted, the question of how best to conduct the gravidity has been even a more unending source of discussion than the preceding condition. Here pelvimetry furnishes us the chief guidance. But before we progress further, let us first break loose from the traditional shackles of our predecessors and their authority, which have so long retarded freedom of thought to such a degree that he who dared to doubt met but derision. I refer chiefly to the murderous practice of inducing premature delivery and embryulcia in this condition. In the present light of science these procedures have no place in the obstetric art in connection with a viable fetus. They simply deserve to be mentioned that they may be the more effectually relegated to the past. This leaves us to choose principally between but two procedures whenever we find the pelvis so distorted or contracted that it precludes all probability to deliver the living child, namely, symphyseotomy and Cæsarean section. Without specifically considering all the points of this very serious condition—which,

fortunately for us, is, comparatively speaking, very rarely encountered in the native-born American women—I would unhesitatingly advise against the termination of gestation, looking more hopefully to ultimately saving the life of both mother and child by resorting to one of the aforesaid operations. It is to be remembered, however, that it is the duty of every intelligent obstetrician to become thoroughly familiarized with the indications as well as the technique of both these operations, neither of which is to be lightly undertaken by any one who does not possess the requisite skill, both in the obstetric art and abdominal surgery.

With regard to the proper selection of these two operations, I can do no better than quote Dr. Barton Cooke Hirst, of Philadelphia, in his address before the Washington Obstetrical and Gynecological Society, November 17, 1893, and published in the *Medical News* December 2, 1893: "It is obvious, therefore, that symphyseotomy can be preferred to Cæsarean section on the one ground alone—that it is less dangerous to the mother. A careful study of the results of symphyseotomy and of Cæsarean section will show that the latter is, at the very least, twice as dangerous to the mother as the former. The mortality of the infants is not quite so great in deliveries by Cæsarean section. Moreover, by Cæsarean section the child is sure to be delivered easily, no matter what the size and shape of the pelvic canal may be, and there is no necessity for that nice calculation in pelvimetry that is usually demanded before a contemplated symphyseotomy, a calculation in which even the best of us may err. With my own experience of three perfectly uncomplicated recoveries from symphyseotomy, I feel disposed to regard this operation with more favor than version and extraction in a markedly contracted pelvis. The opposite error of opening the symphysis when the pelvis is too small to permit of delivery by this means is more difficult to escape. It will only occur in a pelvis with a conjugate of sixty-seven millimeters, or under, a degree of contraction not often seen among us; and could we always be sure of the accuracy of our pelvic measurements, the mistake would pretty surely be avoided. I can imagine no more embarrassing predicament in obstetrics than a failure to extract the head after opening the symphysis. I should feel reluctant to operate again at the lowest limit for symphyseotomy unless I had the opportunity first to induce labor and artificially dilate the cervix some two or three weeks before term. In this case I should not hesitate to operate with a conjugate as low as sixty-five millimeters, and I believe delivery might be possible with a conjugate of only sixty millimeters. We may therefore be guided by the rule that at term, symphyseotomy is available only in cases where the conjugate measures over sixty-seven millimeters, while if the conjugate is found to be sixty-seven millimeters or under, the only recourse to be had is Cæsarean section."

The destruction of the embryo is, however, not only warranted, but becomes a requisite under certain circumstances or conditions; such as the presence of large fibroids in the body of the uterus, or large tumors involving both the ovary and uterus, also cancers of the uterus, and in certain cases, of placenta previa. Placenta previa is another abnormal condition deserving attention. It properly belongs to that class of appalling accidents in the lying-in room, as eclampsia, post-partum hemorrhage, rupture of the womb in uterine pregnancy or of the cyst in tubal pregnancy, etc., which allow but little time for action. Experience teaches that the proper use of forceps in these cases is to be preferred to the hand. The chief reason being that a narrow-bladed forceps can be introduced much earlier than the hand—requiring a dilation of only about one inch as compared with two and three-quarter inches for the hand—and, by grasping the head and bringing it down, tampon the placenta at once; whence time may be given sufficient to obtain full dilation and delivery with greatest possible safety to both mother and child. In these cases we may very properly follow the one line of action. As soon as the diagnosis of placenta previa is established our action must be prompt in evacuating the uterine contents. Hemorrhage is the danger signal. When this signal is given early, say prior to the sixth month, and the diagnosis established, we should proceed without any regard for the life of the child. When, however, this signal is given later, we should proceed as promptly, but with all possible endeavor to save the life of both mother and child. Whenever hemorrhage

takes place in these cases it is Nature's signal to us that there is great danger ahead; that the condition is so serious as to endanger, if not to take, the life of the mother at any moment. We cannot accept the situation only as serious, and must act promptly and effectually. The proper antiseptic precautions being observed with special reference to the vagina and the accoucheur's hand, the patient being placed under anesthesia, introducing first the index finger into the cervix, dilating gradually until two fingers are successfully introduced, and, when sufficiently dilated to admit of the forceps, pass the fingers through the body of the placenta, rupturing the membranes and place the forceps on the head, bringing it down and tampon the placenta at once. When, as sometimes happens, the dilation is greater and the presentation abnormal or less favorable, the accoucheur had better resort to the passing of his hand and turning by Braxton-Hicks' method and drawing the child into the cervix, and thus arresting the hemorrhage. The hemorrhage once checked, the subsequent delivery will be fully under control.

I have in this paper but sketched some of the salient and mooted points of the prophylaxis of the complications and needless sufferings of pregnancy, with no attempt at thoroughly elucidating or elaborating any one of them. Having no pet theory to promulgate and sustain at all hazards, no long list of cases and statistics with quotation and abstract from an exhaustive roll of writers has been made out.

CHRISTIAN SCIENCE AGAIN.

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If "Christian Science," the theme of Dr. Longsdorf's paper read at the recent State Medical Society and published in THE MEDICAL AND SOCIETY REPORTER of August 11th, were not a misnomer, it would long since have found ardent advocates among two very pronounced classes of the community, viz: professing christians and men of science, especially of medical science.

The purpose of the writer, however, is not to discuss the theories and claims of this so-called science and its votaries, but rather to appeal to members of our own profession to make more practical use of the one very important truth which forms the warp and woof of all the flimsy sophisms of Christian Science.

Dr. F. C. Herr (MEDICAL AND SURGICAL REPORTER, September 8th) says, very pertinently, "I am quite sure that Dr. Longsdorf must have made a grave error when she says that, 'Christian Science must not be confounded with hypnotism, animal magnetism, faith or mind cure, spiritualism, clairvoyant or other trance or the old-time pow-wowing process.' If Christian Science is not these things, we have abundant reason for alarm, but it is the same old imposter in masquerade dress."

We well may relegate the thing itself to the domain of quackery, and assume towards those who claim to be healers under its provisions, the same attitude that the medical man always takes in the presence of pretension without foundation. He ignores and is indifferent.

Without any critical analysis of the basis upon which Christian Science, along with other allied subjects, rests, we cannot fail to see that the domination of mind over mind easily persuades to a belief in the domination of mind over matter. So far, the advocates of all such methods of healing are rational and scientific in their belief.

Certainly in these days of experimental physiological research, no well-read physician will dispute the fact that mind, or mentality—the volitional and automatic processes of cerebration—does to a great extent modify and control the ever varying conditions of the material man.

Foster (Physiology, Part III, Central Nervous System) says: "Consciousness, as we recognize it, seems to be necessarily operating as, or to be indissolubly asso-

ciated with the presence of, an incessantly repeated internal stimulus, and we cannot conceive of that failing to excite mechanisms of movement." If this be true, then given an influence to bear upon our patient sufficient to bring about that *incessantly repeated internal stimulus*, and what results may we not hope to accomplish.

It seems almost futile to mention illustrations along this line—they will readily recur to all. Pathological conditions most varied and remote are known to result from violent and sudden emotions of either fright or anger, grief or joy. Happiness is a fine cosmetic and is just as sure to promote health, as worriment and care are known to be prolific sources of that faulty metabolism which, sooner or later, results in disturbed function, and may result in almost any visceral lesion.

What are the various functional neuroses but the product of perverted nerve action? We repeat, mental states have produced diseased conditions almost innumerable, from the simplest vaso-motor disturbances familiar to all, as pallor and syncope, to even the more complex clinical picture of diabetic coma* from nervous shock. Dyspnœa, cough, emesis, the inhibition of reflex movements through a counter stimulus, menstruation influenced favorably or unfavorably, the salivary secretion induced or exaggerated by smell or sight of food, even pain ignored and therefore practically expelled by diverting the mind—these are but a few of the physical phenomena occurring in consequence of certain mental states. Apropos of this same truth is Professor Pontain's very interesting article on "Emotional Icterus," (MEDICAL AND SURGICAL REPORTER, September 15th), which, he asserts, "If primary, may be cured without drugs if the patient be in *a tranquil state of mind.*" If disease can be induced thus, it certainly behooves the physician to endeavor to find a way to reverse the process, that he may substitute harmony for discord and ease for disease.

Referring to the many undoubted cures wrought by these would-be scientists—Christian or otherwise, Dr. Longsdorf says truly, "To a rational thinker there is no mystery about the process," but we think she errs in assuming that "it can not be rationally explained so that the subject of it can clearly understand."

That is one of the strongholds of these occult methods—those who practice them trade upon the gullibility of the weak in body and mind. Whereas the regular physician may use not only all the resources of his medical art, but should also use all the powers of his trained mind to dominate the mind of his patient and teach him how to use his own will towards the betterment of his physical condition.

The successful practitioner knows that he owes his success to something more than his efficacious prescriptions; just how large a factor is his personality and the power he possesses to win the confidence of and to control his patient, he may not be able to determine, but he certainly is conscious of it.

Kant has said, "In our moral consciousness we find ourselves under a law which calls upon us to act as beings who are absolutely self-determined or free, and which therefore assures us that our intelligent self is our real self."

Let the wise physician demand that his patient *be* his intelligent self, and act accordingly. Let him seek to arouse the moral consciousness of his patient to a sense of his own inherent power. Let him endeavor at least to induce that tranquil state of mind which certainly assists not only nature but the doctor to work marvellous cures. It may not be quite so easy as to prescribe pills and potions, but this moral consciousness once aroused will become a mighty adjutant to the proper physiological action of whatever therapeutic measures may be instituted. It is like Aristotle's fulcrum, "A fixed point on which reason can set its lever as a secure basis from which to move the human will even against the opposition of all the powers of nature." The neurologist understands this truth and makes use of it. Why should not the general practitioner do the same in selected cases? Where the nervous element is a factor in initiating a diseased condition or in the continuance of it, there is a field and a large one for mental therapeutics.

*Philadelphia Polyclinic, September 15th.

For Whooping Cough.

℞ Sulphonal..... gr j
Creasoti..... mlj
Syrupi tolutani.....
Aquae..... ää ʒij

Misce et fiat mistura.
Two teaspoonfuls to be given every two hours.

—*Western Medical Reporter*

COMMUNICATIONS.

TREATMENT OF ANAL FISTULA.*

J. McFADDEN GASTON, M. D., Atlanta, Ga.

PART I.

For a proper understanding of the principles underlying the management of anal fistula, it is requisite to present some data connected with the rectum.

Morton and Witherill state that the rectum in its upper and middle portion is derived from the internal and middle layers of the blastodermic membrane, while its lower third with the anus, like the buccal cavity, is formed by the external and middle layers. The rectal veins like the rectal arteries are divided into three sets: superior, middle and inferior. They form two distinct venous systems, the rectal emptying into the portal system, and the anal terminating in the internal iliac.

The throat and rectum have many points of correspondence in their structure, being supplied with circular fibers, which make them the counterparts of each other, by opening and closing their respective orifices. There are two sets of muscular fibers encircling the lower part of the rectum, known as the outer and inner sphincter, by which it is automatically closed except when dilated voluntarily for the release of flatus or the discharge of fecal matter. There is also another distribution of circular contractile muscular fibers at the upper limit of the rectum, which constitutes the division between it and the sigmoid flexure of the colon. This may be appropriately designated the recto-colic sphincter, and forms an effective barrier ordinarily to the descent of the excrement into the rectum. This annular muscle has not received from anatomists or physiologists the consideration which its rôle in the intestinal functions warrants. It is a veritable constriction from muscular contraction by which the colon is normally closed against the descent of the fecal mass into the rectum. When the excrementitious matter reaches the sigmoid flexure of the colon it is deprived of all the nutritious properties and after this desiccated mass passes the muscular division between the colon and rectum, and is deposited in the lower reservoir it contains only effete matters.

The fecal deposit acts then as a foreign body, and stimulates this canal to expel the débris by the anal orifice, or by remaining there becomes a source of trouble and even of disease. If the indurated mass remains in the rectum for an undue period, it induces more or less local disturbance and extends an etherism to the general system, through the nerve supply to this portion of the organism.

The rectum is a pouch or depository consisting of contractile tissue and capable of great distension under the accumulation of the fecal matter within it. While its proper function is that of a temporary reservoir with the property of contraction for the expulsion of its contents, it may fail to perform the office of a waste pipe and become shut off as it were by sphincters above and below. These annular muscles are provided with somewhat similar means of opening and closing at each extremity of the rectal canal; and being composed of tissues in their walls, which are alike subject to induration and thickening, with constriction of the passage.

Zeigler qualifies proctitis as an inflammation of the rectum, resembling in many points inflammation of the vermiform appendix. The exciting agents are frequently foreign matters and stagnating feces; but disturbance of the circulation in the hemorrhoidal veins may likewise end by inducing inflammatory change in the bowel.

When the inflammation and ulceration extend deeply into the tissues of the wall of the bowel, the surrounding connective tissue becomes infiltrated and hypoplastic or breaks down into abscesses containing fetid pus.

Thus it occurs that the rectum becomes a seat of disease and among its disorders fistulæ are not uncommon, either as sequelæ of peri-rectal abscesses or resulting from abrasions and ulceration of the inner coat.

*Read by title before the Section on Surgery, American Medical Association, 1894.

Apart from fecal concretions and enteroliths lodged in the rectum and becoming sources of irritation and inflammation to its mucous coat, there are foreign bodies which pass through the alimentary canal and find their way into the rectum to cause trouble in the surrounding structures. Fish bones, spiculæ of chicken bones and other bony fragments have frequently been found in peri-rectal abscesses after having perforated the rectal wall. Very recently I removed a spicula of bone over an inch in length which had become lodged just within the external sphincter, and one extremity had perforated into the mucous membrane of the rectum. This would have ultimately effected an opening through which the fecal matter could have penetrated the tissues and set up a suppurative process. The incautious introduction of a syringe pipe or other solid substances may also induce abrasions of the mucous membrane of the rectum which will terminate in ulceration and perforation of the rectal wall.

The attempt to remove hardened fecal matter with a scoop or with the fingers may lead to a bad result. But there are scores of disorders from injuries inflicted in the parts immediately around the anus, which set up inflammation of the deeper seated structure. Violence of any kind, by a kick, sitting down upon a projection, or being thrown upon the pommel of a saddle, may lead to a peri-rectal abscess, which calls for considerable skill in its treatment to avert its termination in a fistulous outlet. The early recognition of such a purulent collection and its discharge by a free incision, with the subsequent use of a drainage tube and light tamponage with antiseptic gauze, is usually attended with a radical cure of such traumatic abscesses. But there will occur cases which will resist treatment or which fail to be properly managed, that result in fistula.

There is a class of tuberculous abscesses in the peri-rectal tissues which are of strumous origin, and independent of any mechanical injury, that are accompanied by fistula of the most aggravated type. This form calls for constitutional as well as local treatment.

It is not a legitimate inference that the drain of a fistula upon the adjacent rectal structures has a salutary influence upon tubercular diseases of the lungs. The evidence is conclusive to my mind that the general debility and constitutional irritability, resulting from the constant wear and tear of fistulæ involving the tissues around the anus, are in most cases aggravating circumstances in the progress of other diseases, and the more effectually they can be cured the better the result. There was a period when the names of distinguished members of the medical profession were arrayed against operating for fistula in ano when it occurred in a tubercular subject. But the weight of authority is now favorable to operative interference for eliminating the local disorder and arresting the drain upon the system.

Instead of the chronic cure by a slow treatment for fistula in ano, with oft-repeated temporizing applications, in subjects of tubercular disease, it is decidedly preferable to secure the prompt effect of a speedy and radical operation in cutting short the evil.

The openings may occur at distances from the anus, varying greatly, both internally and externally. Where there is a sulcus forming a semi-circle around the lower portion of the rectum, it is recognized as a horseshoe fistula, and may have the opening in the skin on the opposite side from that in the wall of the bowel.

The usual division of complete and incomplete is based upon the existence of an external and internal opening in the former, and either one or the other in the latter. Those having but one opening are known as blind fistulas and we may have a blind external or a blind internal fistula, as the opening occurs in the skin outside of the anus, or in the mucous coat within the anus.

The cases in which the two openings in close proximity to the anus are presented, usually involve only the external sphincter, and have the internal orifice between this and the internal sphincter in the depression which exists in the space between the two muscles. This is accounted for by Allingham in the following manner: "The abscess forming, in most cases just outside of the anus, does not burrow deeply but passes close under the external sphincter; it then is prevented from ascending higher up the bowel by the thick band of the internal sphincter, and consequently is turned inward and makes its way through the lax areolar tissue." This explains those cases in which the primary

abscess is outside of the rectum; but a large proportion of fistulas have their origin inside, and by perforation of the rectal wall admit the fecal matter which works its way by suppuration out through the skin beyond the border of the anus, forming a complete fistula.

When the abscess commences in the ischio-rectal fossa it burrows deeply, according to Allingham, and then most usually passes beneath the internal sphincter and opens, if at all, high up in the rectum. There may be more than one aperture in the rectal wall communicating with the different fistulous tracts, leading out through the skin at varying distances from the anus. When the openings occur high up in the wall of the rectum, and the suppurating process extends from these into the surrounding tissue of the buttock, several external orifices may be found in the skin of the hip, even at a distance of six or eight inches from the anus. Comparatively few of these cases have been noted in this country, but quite a number of them came under my observation during my sojourn in South America. Some of these extensive fistulas will be referred to in connection with the surgical measures adopted for their relief.

The foregoing pathologic indications have not included a distinct recognition of what constitutes a fistula, and it may be defined as the ulcerated outlet of a suppurating tract through the subcutaneous tissues. This irregular and often tortuous channel is surrounded by a pyogenic membrane, bounded by a fibrinous deposit, which imparts a sense of induration to the touch by palpation. The object of treatment in any form should be the obliteration of this canal and the apertures connected with it, whether internal or external.

PART II.

As a preliminary step toward any measure of treatment for fistula in ano, whatever may be its form, it would be desirable to have the bowels frequently evacuated for two successive days, and to use an enema of warm soap water during the morning of the day fixed for an operation. After this procedure the patient should be placed upon the side, with the hips projecting over the edge of the bed so that the fistulous opening shall be uppermost, and a speculum introduced into the rectum with a view to open moderately the anus. A syringe with a small beak may now be employed to pass a 50 per cent. solution of the peroxid of hydrogen from the external aperture through the fistulous canal and out at the inner aperture, leaving it to escape through the dilated anus. This should be followed with an injection into the fistula of a mixture of one drachm of the concentrated Lugol's solution with four ounces of warm water, letting it escape by the anus, as in using the other wash. Lastly a stream of sterilized warm water should be passed through the fistulous tract and the patient is ready for whatever operation may be indicated.

Various processes have been employed for the cure of anal fistulæ, some of which look to the correction of the conditions involving the use of injections into the tract, while others by mechanical devices procure its obliteration, and again the more radical measure of a cutting operation is held to be the most effective treatment. It is evident that different modes of procedure are requisite, according to the nature of the case, and that which is applicable to the superficial complete anal fistula cannot be adopted in the deep-seated anal fistula with one or more apertures in the bowel communicating by fistulous tracts with several outlets in the skin at varying distances from the anus.

When there is an external orifice within an inch or less of the margin of the anus, and an internal opening within an inch or less of the aperture of the anus, the knife may be safely employed. A grooved director being introduced at the external opening is carried gently along the tract of the fistula until it emerges from the internal opening into the lumen of the bowel, when the index finger of the left hand is passed into the anus and up to the end of the director.

If from any cause the director is not found protruding, it should be guided by the finger into the aperture, or if not found, the end of the director may be forced through the thinnest part of the intestinal wall; and then passing the end of the finger beyond the point of the director it should be brought outside. The tissues lying between the external and internal openings of the fistule are now resting over the director and entirely exposed to the view of the operator. At this point

I have found a departure from the custom of using a curved bistoury to give satisfactory results, and would advise the broad straight bistoury to be placed with its back in the groove of the director and thrust through this intervening structure, which includes the external sphincter muscle. If the fistulous tract is not located at the right angle to the border of the sphincter, the director should be forced into a position to make the cut transverse to the fibers of the sphincter muscle.

The next step is scraping out or curetting thoroughly the fistulous tract so as to remove the pyogenic membrane, and thus place the bottom of the wound in a favorable condition for the process of granulation. Packing the line of the fistula from the external to the internal opening with iodoform gauze, and filling up the incision with loose gauze over this, a compress may be secured with a T-bandage to keep the dressing in position.

There is usually so much sero-sanguinolent oozing after this operation as to soak the dressing and require redressing within twenty-four hours. When fresh dressing with iodoform gauze is thus applied, no further change is requisite for three days. Unless a movement of the bowels should take place there can be no object in removing the dressing, but if a fecal evacuation occurs, the parts should be thoroughly washed with carbolized water from a syringe, and the dressing re-applied as previously. So soon as the bottom of the incision along the fistulous tract is found to be studded with granulations, the packings should be discontinued and the sides of the wound brought in contact to secure union of granulation in all parts.

The practice of former times, in keeping the sides of the incision separated by lint or gauze until the wound fills up with granulations from the bottom, is a fruitful source of protracted suffering to the patient and conducive to that loathsome result of inability to retain the feces and intestinal gases. If the curetting is done efficiently at the outset and the packing applied properly in the bottom of the wound for one week, the granulating process ought to be so developed in this time as to warrant the closure of the incision. By the use of firm compresses on either side, held in place by strips of adhesive plaster or bandages, an operation of this kind should not require the attention of the surgeon more than two weeks. The union secured in this way between the divided parts of the sphincter obviates all inconvenience afterwards from fecal incontinence.

The attempt to dissect out the tract, when a fistula is laid open, has not been attended with results which encourage the immediate closure of the incision after an operation and hence need not be dwelt upon here.

In regard to those cases in which the internal opening of the fistula is found above the internal sphincter, but within two inches of the anal orifice, while the external opening is something over an inch from the margin of the anus, the knife may still be employed with safety. But in view of the difficulty or even impracticability of turning the point of a grooved director out at the anus, the process may be modified by introducing a concavo-convex wooden guard into the rectum to receive and support the point of the director when it emerges from the internal opening of the fistula.

An assistant should hold the director firmly while the operator secures the guard and makes the incision with the broad straight bistoury, by thrusting it along the groove of the director until the guard is is reached and then cutting inward so as to divide all the intervening tissues. The subsequent management of the case corresponds very much to that above described, except that the packing must be carried higher up into the rectum to reach the end of the incision.

In this class of cases the elastic ligature has been employed with satisfactory results by some operators. It certainly has at least the recommendation of lessening the liability to hemorrhage which attends a cutting operation that extends above the internal sphincter. There is a decided advantage in using the elastic ligature instead of silk or other material which only cuts through a limited portion of the inclosed tisssue, as the latter must be tightened from time to time, whereas the former continues the constriction until all the tissue is divided. In either case, however, there must be considerable delay in the process of cutting through the structures involved, and there is suppuration continuously, not only along the original fistulous tract, but from the entire surface

left behind the ligature as it cuts its way out. Under these unfavorable conditions it is very desirable to adopt another procedure which may accomplish the end in view more expeditiously, without hemorrhage and without suppuration. All these requirements are fullfilled completely by employing the chain ecraseur. This is suited not alone to the fistulæ having an external and an internal opening within an inch to two inches from the anus, but to those opening high up in the rectum and at a distance of several inches outside of the anus, through one or a number of apertures in the skin of the buttock. Having treated some cases of deep-seated extensive fistula in ano by this process during my sojourn in South America, which were reported in the *American Journal of Medical Sciences*, of July, 1881, I will present a few of the points recorded in that paper, to which members are referred:

If the source of the fistula is high up in the rectum, the route of the discharge may be in the direction of the sacrum or through the muscular fibers of the gluteus, and there may be several lines of communication with the surface. When the tract penetrates to such a depth as to cause apprehension of hemorrhage by cutting with a knife, the tissues may be divided without any risk by the chain of the ecraseur of Chassaignac. The essential conditions which indicated this operation have been observed in four cases of extensive fistula in ano.

The internal opening in each case was high up in the rectum, and the fistula extended from this aperture deeply into the surrounding tissues, so that the line of communication between the internal orifice and the external outlet of these fistulæ exceeded six inches in length, involving the structures on a large scale.

As the space allowed for this paper does not admit of details and the record of the treatment with two chains at the same time is given in the report of the last case, it may be quoted verbatim from the journal. Chloroform anesthesia was used in all cases: "Case 4, had two deep fistulas, whose external outlets were nearly equal—distant from the junction of the sacrum and coccyx on either side, having each a communication with an opening about midway up the rectum. The channels being tortuous could not be traversed by a metallic probe or director, yet they were explored by a flexible bougie, to which the chain of the ecraseur was attached, and thus loops were thrown around the intervening parts. Two instruments were used so as to encircle the tissues on either side and divide them at the same time. As the chains included a portion of the buttock containing no vessels that could yield any amount of blood, the tightening was done rather too fast, and as a consequence there was some sanguineous oozing from the divided surfaces of the muscles. This, however, ceased upon the application of a strong aqueous solution of phenic acid, which has proved in my hands an effective hemostatic, even when small arterial twigs are divided by the knife.

"The usual dressing of fine strips of old linen saturated with carbolized oil was kept up for some weeks, and the cure was completed within two months, so that the negress went about her duties on the farm."

The most remarkable feature in connection with these extensive divisions of the deep-seated fistulas, involving the cellular tissue with the muscular fibers surrounding the rectum, is the comparatively slight effect produced upon the general system. There has been little febrile excitements and the restorative process has progressed satisfactorily after all these heroic operations.

Borax as an Aid to the Digestion of Milk.

Germaine Sée has recently announced the clinical fact that borax used internally is a valuable aid to the digestion of milk. He discards the use of carminatives, charcoal and other intestinal antiseptics, claiming that they injure the mucous membrane of the intestines. He employs laxatives—hydrastis canadensis, castor oil, and olive oil in large doses, or oil enemeta. Prof. Sée holds that in many cases of indigestion the stomach is erroneously treated when the real cause of the disease is the intestines, which are often the seat of membranous enteritis resulting from constipation, and giving rise to glary, mucilaginous, cylindrical masses of mucus, with pain and swelling over the region of the colon. These symptoms easily distinguished the cases referred to from ordinary constipation, in which there may be easily seen masses of filamentous or vermicelli-like mucus.—*Modern Medicine.*

LUBRICATING CATHETERS.

L. D. MORSE, M. D., San Mateo, Cal.

In the number of the Medical and Surgical Reporter for May 19th, Dr. J. M. Kitchen is quoted as recommending castor oil as an excellent material for lubricating catheters. I have seen, at different times, the same recommendation by other physicians.

I differ most seriously from this opinion. I do not believe that castor oil is non-irritating. If so, why does it act as a cathartic? I have seen a good deal of of irritation caused by using it to clean foul sheath in horses. It is excellent to oil buggy axles. It has an unpleasant odor. It is tenacious truly, and according to Dr. Kitchen, "should always be applied warm." Who, that is obliged to use a catheter three or four times a day, often away from home, would like to be bothered with warming nasty castor oil every time he had to urinate? And wherefore? It is absurd.

I am in the middle of my 73d year. For the past four years, in consequence of an enlarged prostate gland, I have had to use a catheter, and cannot urinate without it.

I use exclusively the soft, rubber catheter. For a lubricant I use California olive oil—*pure*. I am safe in saying that all imported olive oil is adulterated with cotton seed oil to the extent of at least two-thirds. This has been proven. In California we have a law that forbids any one, under penalty, from selling under the name of California olive oil, anything but the pure article. One concern, at least, has been forced to change their label to "salad oil."

To an ounce of olive oil I add twenty to twenty-five drops of eucalyptus oil, as an antiseptic. The catheter, after using, is rinsed out in Zymocide or Listerine, and is most of the time left in a bottle containing one or the other of these antiseptics. The utmost cleanliness as well as antisepsis, is required to prevent a urinary odor which will lead to inflammation. I have learned by bitter experience what I probably would not have learned otherwise.

I may add that I have found pure olive oil very useful for partial or general inunction, more especially in the eruptive fevers, and, I think, is much preferable to any seed oil. It may be medicated according to circumstances. I often use eucalyptus oil, and sometimes carbolic acid in the desquamation of scarlatina.

TRANSLATIONS.

THERAPEUTICAL SUGGESTIONS FROM FOREIGN JOURNALS.*

A CASE OF SEVERE DIABETES CURED BY OPIUM IN LARGE DOSES.

Dr. K. Bohland (*La Semaine Médicale* No. 48, 1894) reports the case of a man of fifty-nine years, of alcoholic parents who, very weak and emaciated in spite of an antidiabetic diet, passed during twenty-four hours three to four litres of urine, containing 100-200 grams of sugar, but without trace of albumen, acetone or diacetic acid. His appetite was decreased and his skin dry; the internal organs were apparently normal. Antipyrine and other antidiabetic remedies were of no avail; a sojourn at Neuenahr only caused an aggravation. He then began to suffer from insomnia and bilateral sciatica, while his emaciation increased still more. Bohland then prescribed him laudanum (Sydenham's), fifteen drops, three times a day. As the pains were intense, the patient rapidly increased the dose to two to three hundred drops a day; at the same he maintained a strict antidiabetic diet. Under the influence of this treatment the sugar commenced to diminish, little by little, so that at the end of a few months, it had completely disappeared. At this

* In charge of the Translator, F. H. Pritchard, A. M., M. D.

period he presented the characteristic signs of chronic morphine poisoning; his pupils were contracted, he complained of trembling, weakness of memory and considerable general debility. Nevertheless he continued to take the drug, in teaspoonful doses. The urine was passed in normal quantity and contained neither albumen nor sugar, though he partook of a mixed diet in abundance. The glycosuria did not then return even when he took one hundred grams of sugar, in his food. Externally, there was nothing abnormal to be seen; no signs of arterio-sclerosis. The patient was gradually weaned from the drug and, at present, he enjoys good health and is able to work. He has gained forty-two kilograms in weight; his appetite is excellent and his urine never contains the least trace of sugar, but he has developed a cataract in each eye.

TREATMENT OF DIPHTHERIA.

Dr. Brasch (*Muenchener Med. Wochenschrift* No. 18, 1894) has employed, at various times, different methods in the treatment of diphtheria. Since 1889 he uses the following measures. In patients over twelve years of age, where they are able to gargle every hour or two, they are allowed to use with the following:

℞

Corrosive Sublimate	0	1	(grs. jss)
Chlorate Soda	2	0	(grs xxx)
Distilled Water	200-300	0	(℥vjss-ixss)

Antipyrine or the salicylate of soda may be given for the fever, the latter with addition of pilocarpine (0.001-0.005) once to twice a day, as the membranes dissolve more or less rapidly. In grave cases and in small children, he recommends the cyanide of mercury, internally, from the very beginning of the disease and in the following form:

℞

Cyanide mercury	0	1	(grs. jss)
Distilled water	250	0	(℥viij)
Simple syrup	50	0	(℥jss)
Tr. Aconite	1.0-2	0	(gtts. xv-xxx)

A small teaspoonful every half-hour, hour or two hours, in a glass or an earthenware cup, but not from a metallic spoon, according to the severity of the case. For a quarter of an hour after its administration neither food nor drink should be given. Give the remedy day and night.

TO DISGUISE THE URINOUS ODOR IN INCONTINENCE OF URINE.

Dr. Brassert (*La Semaine Médicale*, No. 48, 1894) has taked advantage of the fact that patients under the influence of essence of turpentine excrete a urine smelling strongly of violets, in treating cases of incontinence, etc., where an insupportable odor is given off by such patients. Ten drops of rectified essence of turpentine three times a day, suffice to cause the nauseating odor to disappear and to be replaced by an odor of violets, to the great satisfaction of those about the patient. It may be administered in a little water or milk. It has been used for a long time at Prof. Emminghaus's psychiatrical clinic in Freiburg. It may be continued for several weeks without inconvenience, and is only contra-indicated in ulcer of the stomach, gastric catarrh, nephritis or where it causes dyspepsia or other morbid disturbances. This is a precious measure in private practice where it is difficult to keep such a patient clean from lack of proper care. Another deodorizer which is also used at this same institution, especially in those patients whose cutaneous secretions are fetid, is to give a daily bath to which has been added three or four grams. of permanganate of potash. This has no injurious effect upon the general health of the patient, and rapidly causes the disagreeable odor to disappear.

HYOSCIN IN HYSTERO-EPILEPSY

Dr. Bela Nagy (*Pester Med.-Chirurgische Presse*, No. 8-9, 1894) from an employment of hyoscin in five cases of hystero-epilepsy, comes to the following conclusions:

1. Hyoscin will abort an incipient attack and suppress one which has developed.
2. In most cases it produces sleep.
3. Its action will follow in five to twenty minutes.
4. One milligram is on an average, sufficient.
5. No important disagreeable symptoms were observed after such doses.
6. If employed for some time there is no accustomation to its action.

TREATMENT OF ACCIDENTS FROM ELECTRIC CURRENTS OF GREAT INTENSITY.

Dr. D'Arsonval (*Deutsche Medizenal-Zeitung*, No. 63, 1894) reports a case of shock from an electric current of great intensity, such as is used for illumination. Experiments on animals have demon-

strated that such cases may be saved i artificial respiration be applied at once even though the current be very strong. The condition in question is asphyxia and syncope, states where something can be done. The criminals which have been electrocuted in America, he claims were only apparently dead for they received only 1500 volts; in his experiments he employed one of 2500 volts. He accidentally had an opportunity to test the value of his deductions. On an electric railroad a current of five hundred volts was used with one hundred and ten interruptions (800 milliampères). A workman unconsciously placed himself into the circuit and received the full strength of the current. For five minutes he was exposed before it could be cut off. It was forty minutes before medical aid arrived. Though he was thought to be certainly dead, artificial respiration was begun and later rhythmic tractions of the tongue attempted—Laborde's method. Respiration gradually recommenced; he was transferred to a hospital where he returned to consciousness and is now under treatment for the burns. Another workman who came to the unfortunate man's aid also received a shock but without serious injury. The former was an epileptic.

USE AND MISUSE OF BICARBONATE OF SODA.

Dr. Rosenbach (*Centralblatt f. d. Medicinischen Wisssenschaften*, No. 30, 1894), claims that the bicarbonate of soda is prescribed by far too often to neutralize excess of acid in the stomach. It is, except in extreme cases, difficult to determine whether the excess of acid is abnormal. To determine whether the excess of acid is the real cause of stomachic disturbances, a careful consideration of the patient's occupation, his general condition, feces, nutrition, the consistence of the stool, etc., are necessary. In too rapid eating there is prone to be a faulty relation of motor functionability and production of acid. Formation of organic acids—fatty or lactic acid—may be a cause. Thirdly and most frequently, the dyspepsia is due to pure hyperesthesia of the organ. On account of its sedative action the bicarbonate is often misused and in too large doses; not more than a good sized pinch should be taken at one time. Frequently a piece of dry bread or biscuit will suffice to absorb the excessive acid.

TREATMENT OF HEMATOPORPHYNURIA.

Dr. F. Mueller (*Wiener Klinische Wochenschrift* No. 14, 1894,) had under observation a grave case of hystero-neurasthenia, in a woman who, for five months, took a gram of sulfonal every day, on account of sleeplessness. At the end of this time she commenced to pass a dark brown urine containing hematoporphyrine while her strength and mental powers began to deteriorate rapidly; her pulse was filiform. The hemameter showed that the hemoglobin of the blood had sunken to less than half of the normal quantity. At the same time there was obstinate constipation and scanty urine. The hypnotic was discontinued without result, but a daily dose of five to eight grams of the bicarbonate made a decided improvement. This latter drug was given on account of the great acidity of the urine and the corresponding decreased alkalescence of the blood. Three weeks later the bicarbonate was discontinued for a time, but the hemotoporphynuria reappeared in four days. Given again, the acidity of the urine disappeared, the hemoglobin became normal and after its use for several months the neurasthenia was greatly improved. Also, in a second case, tabes dorsalis, where hematoporphynuria was caused by sulfonal, alkaline treatment caused this symptom to disappear. The patient had taken from one-half to one gram of the drug per diem, for two months.

Dr. E. Schultze, (*Deutsche Medicinische Wochenschrift*, No. 7, 1894), also has observed hematoporphynuria in a case of melancholia in a woman with obstinate constipation, after the use of trional, in a daily dose of one-half to one and a half grams, for four weeks. The urine was of a dirty reddish brown color. Chemical and spectroscopic examination revealed hematoporphyrine to be present. A few days later death followed, with symptoms of rapid dissolution. The small dose compared with that of sulfonal, is worthy of note. Trional is offered as a substitute for sulfonal.

PAIN AFTER EXTRACTION OF A TOOTH.

In the *Revista Medico-Quirurgica Americana*, July, 1894, the following mixture

is recommended in pain after extraction of teeth:

℞

Morphine	o	30 (grs. ivss.)
Tr. Aconite		
Chloroform		
Alcohol ãã	30	o (℥j.)

This formula is especially valuable when the pain continues for several days, as it is sometimes liable to do. Apply locally on a ball of cotton. A mixture of equal parts of chloroform and tincture of aconite, or one containing one part of camphor dissolved in two of chloroform is also praised, in the same condition.

A CASE OF MELANOMA CURED BY ARSENIC INTERNALLY.

Prof. Lassar (*Deutsche Medizinal-Zeitung*, No. 64, 1894), recently presented before the Medical Society of Berlin, a case of malignant melanoma in a woman where a definite cure was obtained by the internal use of arsenic. A nodule had developed beneath the nipple and which was probably due to pressure by one of her corset stays. The little growth had been cauterized, but it returned in a few weeks and grew to the size of a cherry. Any further operative interference, even excision of a piece for histological examination being refused, Fowler's solution was administered in a dose of five drops, three times a day, after meals. The growth commenced to decrease in size and to shrivel up from the very first week. The remedy was discontinued, at times, but the tumor ceased to decrease and even showed tendency to progress until, finally, this year she completed the treatment with an entire disappearance of the tumor. Two months have elapsed since then and no signs of a return have been remarked. He claims that by the early internal administration of arsenic, it is possible to bring a favorable influence to bear on such heteroplastic growths. On account of the great malignancy of melanomata, the ease with which they recur and their rapid generalization, they are among the most feared of cancerous new growths. He claims that no case is known in the literature that has been cured, without an operation. Their general tendency is to progress to a fatal termination even though they remain quiescent for a time. In the case reported, a benign nævus increased in size during the "course" of treatment.

HORDEOLUM.†

Ripault (*Gaz. Med. de Paris*, June 30) remarks that Hordeolum, that small furuncle which springs from the base of the lashes, seems scarcely worthy at first view of a moment's attention; nevertheless, as it gives rise at times to grave errors of diagnosis it is worth while to study its nature and characteristics.

Etiology.—A stye may appear abruptly in a subject whose lids and conjunctivæ are quite healthy; it then comes from a purely accidental inoculation, and has every chance to remain isolated. Ordinarily it is found in lids that are more or less diseased. The patient is suffering from an acute blepharitis, or one that is becoming chronic; the palpebral borders are red, excoriated, thickened, the seat of intense itching; the lashes are agglutinated, or have fallen away in places; superficial at first, the infection increases in depth towards the glandular zone. In certain cases lesions of the glands of Meibomms may be noted; small yellowish tracks appear on the conjunctivæ, clearly inflamed in their central points. Finally this furuncular blepharitis which especially limits itself to the lower lid, will be associated with lachrymal conjunctivitis so often unrecognized, but described by Galezowski in particular.

Stye is most common in eyes affected with conjunctivitis, or with strumous kerato-conjunctivitis; children are more readily exposed to it when they have contracted the bad habit of rubbing energetically the lids night and morning, or during the day to relieve the itching. Vices of refraction also occasion it; it may also be produced by the clasp of glasses, the use of magnifying lens, the use of the microscope and by rubbing. Certain professions peculiarly expose the patient to the disease on account of the occular irri-

† Translated for THE MEDICAL AND SURGICAL REPORTER, by W. A. N. Dorland, M. D.

tation produced; the dust of mills, of grain, of charcoal, may readily produce a stye. Women and young girls may be affected with it at each menstrual period; sexual infection is an undoubted source of the disease. Finally the furuncular diathesis is essential to the production of stye.

Pathologic Anatomy.—This is based entirely upon that of any furuncle, and presents nothing of special interest.

Symptoms: Its onset is always abrupt, with more or less intense itching, with finally a slight pain like the pricking of a pin. There then appears on the free margin of the lid, a small red point which becomes pronounced and shows a tendency to spread. Winking movements are very disagreeable and are rendered more difficult; if the small, inflamed surface be touched, one provokes an acute pain against which the patient involuntarily defends himself. Usually at the end of three or four days, there is experienced a severe tension accompanied by slight paroxysmal lancinating pains indicative of suppuration; the tumor increases in size and at its summit may be noted a characteristic small yellow spot; when this is discharged the tumor quickly disappears and cicatrization is rapidly accomplished. The general phenomena are slight or absent; at times there will be some malaise and anorexia; there is no true fever. The stye may be single and absolutely ephemeral, but this is not the rule. Ordinarily there will be found two or even several in different stages of development upon one or both lids. Often there will be an uninterrupted series of these furuncles tormenting the patient during weeks or months; these relapses constitute the principle discomfort to the affection. The *diagnosis* is plain.

The *Treatment* consists in applications of repeated antiseptic compresses; then as soon as pus has formed, an incision should be made with a small bistoury; a slight digital compression will aid in the discharge of the matter. To prevent the return of the disease, antiseptic pomades may be used each night, such as vaseline 5 grams and yellow oxid of mercury 5 centigrams; tepid lotions, morning and night, with saturated boric water are of service. The preventive treatment will be based upon the diagnostic etiology; the general state must not be neglected; local and general prophylaxis is essential.

BACTERIOLOGICAL NOTES.

CULTIVATION OF THE TETANUS BACILLUS.

Frothingham, (*Am. Jour. Med. Sci.*, May, 1894,) gives the results of his investigation into the methods of cultivating the *tetanus bacillus*. The difficulties attending the cultivation of this organism in pure culture are met with in its isolation from the other organisms with which it is usually associated in the infected wound. Although it is an anærobic bacillus it is not difficult to cultivate it after it is obtained in pure culture. Many methods have been suggested for the isolation of this bacillus, several of which the author reviews. The method suggested by the author, he believes may be of practical use in the diagnosis of tetanus in certain suspected cases of traumatic origin. Without entering into a discussion of his method of obtaining pure cultures of this organism from traumatic origin or from experimental animals, a summary of process is given.

1. "Inoculate alkaline bouillon with the pus from the wound, or, pus being absent, small bits of tissue from inside of the wound, or in experimental animals inoculated with pure cultures, bits of tissue from the regions of the point of inoculation are used.

2. Place tubes in an atmosphere of hydrogen and in the breeding oven for forty-eight hours.

3. Examine microscopically, and if tetanus bacilli are present,

4. Heat from three-quarters of an hour to an hour, in water-bath previously heated to 80° C.

5. From heated tubes inoculate fresh bouillon and place in thermostat under hydrogen for forty-eight hours.

6. Test purity by microscopic examination and make cultures in gelatin, agar, etc.

7. Test virulence on mice, white or gray.

A NEW STAIN FOR GONOCOCCUS.

The importance of a satisfactory method for staining gonococci is obvious in certain doubtful cases of suspected urethritis. Lanz (*Deut. Med. Wochenschrift*, 1894, No. 9), recommends the following method:

A cover-glass preparation, made in the usual way from the secretions, is immersed for from one-half to two minutes in a 20 per cent. solution of trichloracetic acid and washed in water. It is then placed in the stain for from three to four minutes. The stain used is made as follows: 30 cc. of water, 1 to 2 drops of a 5 per cent. carbolic acid solution and saturated alcoholic solution of methylene-blue in sufficient quantity to give to the liquid a deep blue color. After staining the preparation is washed in water, dried in the air and mounted in balsam, or examined at once in water. The gonococci are said to be very nicely stained and clearly differentiated, as the acid used has the effect of preventing the protoplasm of the cells from becoming deeply stained. The author also states that a beautiful double stain may be obtained by after staining with Bismarck-brown.

THE EFFECT OF THE TOXINES OF ERYSIPELAS AND BACILLUS PRODIGIOSUS ON INOPERABLE MALIGNANT TUMORS.

In 1892, Dr. Coley of New York, published a paper on the treatment of malignant tumors by repeated inoculation of erysipelas. Although measurably successful the method has been changed to the use of the toxines of the streptococcus of erysipelas and *bacillus prodigiosus*, obtained from pure cultures of these bacteria. In the July number of *The American Journal of Medical Sciences* Dr. Coley has given the results of his investigation with these toxines and the methods used in their preparation. He summarizes his results as follows:

1. The curative action of erysipelas upon malignant tumors is an established fact.
2. This action is much more powerful in sarcoma than carcinoma.
3. This action is chiefly due to the toxines of the erysipelas streptococcus, which may be isolated and used with safety.
4. This action is greatly increased by the addition of the toxines of *bacillus prodigiosus*.
5. The toxines to be of value should come from virulent cultures and should be freshly prepared.
6. The results obtained from the use of toxines without danger are so nearly equal to those obtained from an attack of erysipelas that inoculation should be rarely restored to.

PALIATIVE TREATMENT OF UTERINE CANCER.

In cases where operation is impracticable as the malignant deposits cannot be removed entire, Boldt (*British Medical Journal*) recommends as the best form of treatment curetting and subsequent cauterization. Curetting and packing with pledgets saturated with chloride of zinc also proves beneficial. If rigid antiseptic precautions be taken piercing of the uterus by the curette may do no harm. The uterus is curetted, then the cavity is sponged with a mixture of commercial acetic acid (1 drachm), glycerine (3 drachms), and carbolic acid (20 grains.) Lastly the cavity is packed with absorbent wool.

Papoid in Diphtheria.

Dr. J. Lewis Smith, of New York, recommends papoid in diphtheria, after an experience in sixty-three cases. He first cleansed the surface with a spray of hydrogen peroxide, and then applied the papoid in the form of a powder.

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SATURDAY, OCTOBER 6, 1894.

EDITORIAL.

THE CAUSATION OF CANCER.

What may be the agent directly the causation of cancer, what its nature and life history, is a problem that, thus far, has eluded all attempts at solution. The experiences of clinical observers accumulated through centuries, had made the medical profession thoroughly familiar with the symptoms and physical signs of the dreaded disease; but this knowledge concerned the results rather that the causation of cancer, and little progress had been made toward successful treatment. Many and divers theories were put forth to account for its existence; none were able to meet all the conditions required, and cancer was accepted as a disease incurable.

The advent of the microscope practically created scientific pathology. The use of instruments of precision rendered possible greater progress toward solution within a decade, than had been accomplished during all the centuries preceding. Pathological anatomy has informed us of the elements, structure and evolution of the morbid condition. It has shown us what cancer is. It has not made manifest its primal cause. The objective has taught us what is the most valuable and accurate of our pathological knowledge. But investigation has now attained a point beyond which the microscope can not penetrate, and other methods are necessary to supplement and complete its revelations. We have learned nothing as to the causation of cancer, nothing as to its prevention, nothing as to its cure. Despite our boasted enlightenment where cancer exists, should metastasis have occurred, the most radical operation of the boldest surgeon is of no avail. Cancer is still classed as a disease incurable.

In this epoch of micro-biology, it is both natural and rational that researchers should apply to cancer those theories which have appeared most satisfactory in the investigation of other diseases, and to regard cancer as a disease of microbic origin. The theory is plausible. It satisfies more of the conditions presented by the disease, than has any other theory thus far advanced. It develops directly the clues given by the microscope. If thus far it has failed of proof, on the other hand it has not been disproved. That cancer presents conditions widely differing from those presented by other diseases

which we now accept as of microbic origin, does not militate against the assumption of such origin. It appears to be analagous to diseases which we know are dependent upon infection with parasites. The most advanced of modern experimenters and observers tentatively catalog cancer as a disease of parasitic origin.

It must be remembered, however, that the "parasitic causation of cancer" accepted as a working hypothesis is one thing, and the "parasitic causation of cancer" accepted as a demonstrated fact, is very different. To seize upon an immature hypothesis and proclaim it as a dogma, is an act of unmitigated folly. The disastrous consequences of such folly have repeatedly been brought home to this generation. It is hardly necessary to mention the cure of consumption by sulphuretted hydrogen, or the rejuvenation of mummies by the elixir of life, or the more recent annihilation of tuberculosis by tuberculin. Similar fads exist today, and still they come. As a working hypothesis, the parasitic causation of cancer is acceptable. But until the theory depends on something more than inference, it is not a proper basis for scientific treatment. The subject is *sub judice* and the testimony of all credible witnesses must be heard and given consideration.

In this connection a report to the British Medical Association, of the results of careful experiments and observations, made by Mr. D'Arcy Power, (*British Medical Journal*), is of interest. This observer assumed that a protozoon was present in cancer, and endeavored to trace it from the tissue forwards into the soil, and thence onward into the animal. His experiments were conducted under conditions approaching, as nearly as possible, those which clinical experience have shown most favorable for the production and development of cancer. The hypothetical protozoon was assumed to be transmitted either through the agency of the soil, or of insects, or possibly through that of water. Selected specimens of soil from localities remarkable for high mortality from cancer, as shown by statistical returns, were prepared in such manner as seemed to fulfill all the conditions for the successful propagation of cancer, if, perchance, there was a cancer organism, and if a part of its life was passed in the earth. Cages of open wire work were put upon the prepared soil, and white rats were placed in the cages so that their feet and tails remained in constant contact with the earth.

Assuming that cancer is produced by an organism, that organism must gain access to the body, unless it be held that the host was born with the germ—an untenable hypothesis. The only ways in which such a parasite could effect entrance into the body is by the respiratory or digestive tracts, by direct inoculation of a wound, or by implantation into the skin or mucous membrane. It has been shown that the healthy uninjured skin of men and animals is permeable to microbes, which enter between the sheath and shaft of the hairs; but not through the orifices of the sweat and sebaceous glands. It has been shown that cancer cannot be produced by feeding experiments. The author's own results prove that it cannot be produced through the mucous membrane. The great difficulty of inoculation from without has been demonstrated, and what would seem positive results in such external inoculations, are not above criticism. It seems therefore that cancer might possibly enter the body through the respiratory system and then pass to the tissues most suitable for their growth and development, as in the case of many infective organisms. On this account the rats were frequently sprayed with cancer pulp, and throughout the experiment care was taken to keep the mucous membrane of their vaginæ in a state of slight but chronic irritation, so as to provide a point

of least resistance. Six rats underwent the same treatment.

Mr. Power relates:—

"They lived upon the soil for about eleven months each; four were killed, and two died, one from cold, and the other, at post mortem examination was found to have a large tapeworm lying free in its peritoneal cavity. A careful necropsy was made in each case, but in no instance could a trace of cancer be detected in any of the organisms or tissues either by the naked eye or microscopically. The lungs of two of the rats which had been subjected to the spray were found to be shrunken, and their edges were studded with dense white nodules. The center of each nodule was softer than the outside, and consisted microscopically of round cells of the type of ordinary granulation tissue, whilst the external portion was formed of the pulmonary alveoli blocked with cells apparently derived from the epithelial lining. There was a considerable quantity of extravasated blood in the vesicles, and the red corpuscles were in many cases undergoing disintegration. Numerous spheroidal and granular cells, such as are common in irritated epithelium, and exactly resembling those found in the segmentation cavity of an incubated hen's egg, lay in the blocked vesicles. They were in all probability eosinophile leucocytes. The deeper portions of the cortex of the nodule consisted of newly-formed fibrous tissue. The explanation of these appearances in the lungs seems to be that as a result of the irritating action of the spray, or of substances introduced by the spray, there was congestion leading to an extravasation of blood into the alveoli; farther irritation led to multiplication of the epithelial cells lining the pulmonary alveoli; finally there was a fibrillation and contraction of the newly formed inflammatory products. In other words, there were set up all the changes leading to the condition known as 'pseudo-tuberculosis,' the results of a defensive or phagocytic inflammation."

Mr. Power, continues:—

"Another question which arises out of a consideration of the etiology of cancer is, How is the disease distributed? The conclusions arrived at by Surgeon Hehir and by the great Italian school of scientific medicine in regard to malaria appear to have a certain bearing upon this question. Ague certainly, and cancer possibly, are produced by specific organisms of the nature of protozoa, which gain access to the body from without."

"The disease cannot be inocu lated in either case or, in other words, in neither disease does the organism when once it has been introduced into the body, leave it again in a condition fitted to reproduce the disease. Malaria however differs from cancer in its termination. In malaria there is no tendency on the part of the parasite to kill its host; in cancer the disease usually progresses steadily towards a fatal issue. This at once marks a difference between the two organisms and it may lead to a better knowledge of the distribution of these diseases. In a very able paper, which appeared in the *St. Thomas's Hospital Reports*, for 1892, entitled Specific Diseases Considered with Reference to the Laws of Parasitism, Dr. Payne points out (p. 86) that if death is a usual or frequent consequence of any parasitic disease, it raises the presumption that the vitality of the infecting organism is not destroyed, or even that the continuance of the species may be favoured by this event. Many difficulties at once offer themselves in regard to the parasitic theory of the origin of cancer if it be considered from this standpoint. The disease is too exclusively human for any wide distribution to be effected by the disintegration of the host's body such as takes place in anthrax, the plague, or typhus. It is possible to assume that the hypothetical protozoon causing cancer is only one stage in the alternation of generations which is so frequent in the lower forms of animal and vegetable life, and it is this point which I have endeavored to elucidate, but so far without success. It is of course possible, too, to assume that the cancer germ is exclusively human in its proclivities, as appears to be suggested by the case with which Hahn and von Bergmann are reported to have transferred cancer from one part to another of a cancerous patient's body, though here again their experiments are open obviously to another interpretation."

"The 'cancer organism,' which was described by Dr. Ruffer in his earlier papers, appears to be exclusive human in this sense, for after grafting cancer, upon the irritated mucous membranes of animals I have succeeded in obtaining appearances which resemble these bodies, and which I have not yet found as a result of the simple irritation of tissues, or after the grafting upon them of such normal epithelial cells as those on the anterior surface of the cornea. In the rabbit the structures resembling Ruffer's 'cancer bodies' are intracellular, and are also found between the cells, but they entirely disappear within a week of the introduction of the cancerous tissue, and I have not yet ascertained what becomes of them. They are perhaps, destroyed by the cells which they have invaded. If this be so, and assuming that such bodies are the cause of cancer—an assumption which is still gratuitous, for it has to be proved—we have an explanation of our inability to produce the disease artificially in animals. It may be that the 'cancer bodies' are merely phases in the degeneration of cells, and that, as the changes become more marked, these striking appearances disappear."

"The result of my experiments is negative as regards the propagation of cancer, but interesting preparations have been obtained showing the various forms of cell degenerations. Many of these degenerated cells have been described by different writers as parasites. They are met with, in normal epithelium which has been slightly irritated, and I am therefore bound to confess myself an unbeliever in any of the 'cancer bodies' which have yet been discovered. No evidence has been adduced to show that they are other than the results of cell degenerations, modified, it may be, by the conditions under which they occur, but not differing essentially from the changes which take place in cells as a result of chronic irritation. The cause of cancer has still to be discovered."

ABSTRACTS.

NEW MEANS OF LOCAL ANÆSTHESIA.

One Dr. K. L. Schleich, of Austria, claims to have discovered that absolute immunity from pain, even during protracted operations, may be obtained by subcutaneous injection of a sugar or salt solution, or of merely cold distilled water; that the results induced are to all intents and purposes identical with those obtained by like employment of cocaine. He adds:

The patient may remain perfectly conscious during the amputation of hand and foot without undergoing the tortures so often inflicted upon the battle-field, or the exceptional dangers of syncope ever present in the operating-room when general narcosis is resorted to.

It is declared that this discovery has already borne the test of several experiments and is about to be applied in the hospitals of Vienna. The explanation of the phenomenon is:

Local insensibility to pain is induced in the case of cocaine by purely chemical changes, while cold water or solutions of sugar and salt act mechanically through high pressure and low temperature. Under the influence of high pressure and sudden low temperature the blood and lymph are driven from the places operated upon, to where the pressure is less. The tissues are thus deprived of their supply of blood, and temporary paralysis of nerves results.

The foregoing seems to have met with favor in numerous quarters, and in one instance at least a surgeon of authority affirms that "its importance is all the more undoubted, seeing that if in a given case cold water alone should fail to produce the needful degree of insensibility, a weak and absolutely harmless solution of cocaine would prove certainly efficacious."

Whether true or false, it is hardly probable that surgeons will give up the use of cocaine, which is deemed certain, in favor of a method which will always be apt to carry with it a feeling of indefiniteness.—*Medical Age.*

FEVER.

With development of our knowledge of the acute infectious diseases has arisen the theory that the fever occurring as a part of their clinical picture is the result of the action on the body of certain diffusible products of bacteria which are their cause. With a view to adding definiteness to this theory, Centanni (*Deutsch. med. Woch.*, 1894, Nos. 7 and 8) was undertaken an exhaustive study of the fever of the infectious diseases, his investigation being directed to the determination of the following points: (1) What are the agents which cause the fever in these diseases? (2) What is the mechanism by which they act? (3) What therapeutic deductions are possible from the facts developed? The work is not yet completed, but a number of facts bearing upon the first question have been discovered, and form the basis of a preliminary paper upon the "Fever-producing Poison of the Bacteria."

The investigation extended to seventeen pathogenic species, seven non-pathogenic, and to cultures made from air, water, putrefying animal matter, and urine, without any attempt to separate or identify the several species. From cultures of these germs, *devoid of peptone*, Centanni obtained, by repeated precipitation with alcohol and dialysis, a substance whose chemical properties are quite distinct from those of the bacterial poisons heretofore described (ptomaïnes, enzymes, toxalbumins), which, when injected into animals, causes fever, prostration, loss of flesh, and finally death, if continued. This substance, which Centanni believed to be the same in all species of bacteria, is designated by him "pyrotoxina bacterica." It is believed to be in some way derived from the protoplasm of the germs, or to be elaborated by it, and its production is thought to be a quality of all bacteria. He is led to believe that the fever

accompanying the acute infectious diseases in man is due to an intoxication of the system by this poison, and explains the irregular course of the fever in the different diseases by the theory that the poison depends for its elaboration upon variable conditions, and that it is these conditions which are different in the various diseases, and at different times in the same disease, not the poison.—*Am. Jour. Med. Sci.*

THE SUBLINGUAL ADMINISTRATION OF HYPODERMATIC TABLETS.

Dr. Paulson writes *The Lancet* (London) that he has found a new use for hypodermatic tablets, viz., their sublingual administration. They may in their entirety be placed beneath the tongue, or a solution made in the usual way and a few drops allowed to fall on this organ. He asserts that the medicament thus placed will exhibit its physiological effect almost if not quite as quickly as if employed subcutaneously, particularly if one takes into account the time essential to prepare the syringe before the injection.

It is somewhat curious, if Dr. Paulson's statements are true, that such a method of administering potent remedies should have been so long overlooked; and yet it apparently has a basis of rationality from the fact that beneath the tongue is a large surface covered with thin transparent membrane nourished by a great number of vessels of considerable size, and, moreover, particularly rich in distribution of active absorbents.

There are many cases in which the sublingual method of administration would doubtless be found of infinite service and often preferable to the hypodermatic, not the least of which is the absence of unfavorable impression often created upon the mind of the patient by the latter method. If the inefficiency and celerity of sublingual medication are all that is claimed, it certainly should be wider known and come into very general use.

Another advantage is avoidance of the difficulty oftentimes encountered in employing powerful remedies by the stomach —this organ may be "in a state of rebellion," secreting mucus to shield its irritated membranes, and contracting frequently to relieve itself, consequently one can know little of what proportion of a remedy thus introduced will be absorbed and what proportion merely serve to increase the aggregation of excretion and waste. On the contrary, by sublingula administration the practitioner is not only certain of the dose, and that it will be absorbed within sixty to one hundred and twenty seconds, but is assured of the full physiological result in about ten minutes to a quarter of an hour. Certainly this simple plan is worthy of trial, and we should be very glad to hear from medical men as to the results obtained. It is said that a tablet of pilocarpine introduced under the tongue acts even more quickly and profusely than when employed hypodermatically. Moreover, there is no hypodermatic tablet, satisfactory in composition for use in the syringe, but what should, if all Dr. Paulson claims is true, be equally available and effective when employed sublingually.—*Medical Age.*

Pasteurized Milk.

Pediatric authorities advise that all milk fed to children should be pasteurized in warm weather—that is, raised to a temperature of 168° F., to destroy ferments and prevent souring. This temperature kills tubercle bacilli, typhoid and other germs that may be present in the fluid. It is true that it also renders the casein of the milk less easily digestible, destroys milk-sugar, and causes proteid matter to adhere to fat globules, thus retarding their digestion; but these results are of little importance clinically, except in the case of weak children, while the benefits are many and obvious.—*Jour. of the Amer. Med. Ass'n.*

Gonorrhœa.

Dr. Edward Martin, of Philadelphia, prescribes:

℞ Balsam capaiba..... .....
Oil sandal-wood..... .....āā mv
Oil cinnamon..... mj

In capsule. Of these he gives 6 to 12 daily, administering them one hour after meals.

CURRENT LITERATURE REVIEWED.

IN CHARGE OF ELLISTON J. MORRIS, M. D., AND SAMUEL M. WILSON, M. D.

THE BRITISH JOURNAL OF DERMATOLOGY

for September contains an illustrated article on

The Function of the Sweat Glands in Man,

by Dr. P. G. Unna.

Describing his theory and experiments by which he proved it at length, the author concludes that "the ordinary sweat glands in man secrete fat, which at any time can be proved both on sections of the skin and in the sweat of the hand, by means of treatment with osmic acid—a fat which, though similar to that of the sebaceous glands, is different from it as stearic acid and margaric acid are from oleic acid."

Dr. Malcolm Morris discusses the

Management of Eczema.

The author thinks that as a general rule the less internal remedies we use the better, but that if a constitutional dyscrasia be recognized it must, of course, receive appropriate treatment.

When the skin lesions are acutely inflammatory the use of antimony seems beneficial, and the author gives ten or twelve minims of wine of antimony, repeating the dose in an hour, and, if necessary, in two more. Gradually the interval is increased and the dose lessened until six minims are given three times daily, and this is continued until the inflammation subsides. Arterial tension is an indication for the use of this drug, and depression a positive contra-indication.

Deficient strength and nerve force may call for strychnia, arsenic, belladonna, phosphorus, quinine, etc., but the author thinks diet has only an indirect influence, through its effect on digestion, the general health, etc.

Every case is treated as though it were of parasitic origin, the objects aimed at being the destruction of micro-organisms, the protection of inflamed surfaces, and the relief of inflammation. In following this plan a weak antiseptic is used and the strength gradually increased. Two favorites with the author are sulphur and resorcin, because they not only kill micro-organisms but promote exfoliation of affected cuticle, and he usually commences with an ointment containing ten grains of one of these in an ounce of zinc ointment. When much inflammation is present ichthyol in some cooling "cream" is used.

The plaster mull of Unna, composed of carbolic acid, mercury and oxide of zinc, has been useful in chronic cases where the area affected was limited.

While change of climate is often beneficial, the personal idiosyncrasy plays such a prominent part that one must often choose as much with the object of making a change as for any special property the place chosen possesses.

Dr. Unna demonstrated the presence of more cocci in eczema, and finding that they grow only in the presence of free oxygen, proposes sealing the surface of affected parts, so as to exclude this gas.

Dr. Henry Standford reports a case of

Summer Eruption

somewhat resembling hydroa vacciniform.

THE ST. LOUIS MEDICAL AND SURGICAL JOURNAL

for September. Dr. A. H. Ohmann-Dumesnil advocates the application, on a small wooden spatula, of C. P. nitric acid to mucous patches of the mouth, pharynx, etc., as superior to most other methods of treatment.

Bone Marrow in the Treatment of Pernicious Anemia.

Dr. Thomas R. Fraser, in the *British Medical Journal*, has a very interesting article on the results obtained in pernicious anemia by giving bone marrow. The patient was a gardener, aged sixty years, and had the symptoms of frequent vomiting and diarrhea, edema of the feet and ankles, moderate and irregular pyrexia, dimness of vision, retinal hemorrhages, dyspnea, and latterly complete prostration. The hemocytes of the blood varied from from 1,860,000 to 1,460,000 per cubic millimeter, and the hemoglobin from 27 to 30 per cent, the specific gravity being 1038. There was great distortion in the shape and variation in the size of the hemocytes, which did not form rouleaux. Retinal hemorrhages were present in both eyes. The ordinary treatment of iron and arsenic was instituted and the examination of the blood showed further deterioration. In the fifth week ox-bone marrow was given by the mouth, uncooked, three ounces daily, in addition to the medicines. A rapid improvement ensued. The patient soon recovered strength and body weight, could remain out of bed and appetite was better. At the end of about four months the hemocytes remained at about 3,400,000, the hemoglobin averaged 70 to 75 per cent. and the specific gravity 1059. The patient felt strong and enjoyed doing light manual work. He had no subjective symptoms, and the "hemic," venous and cardiac *bruits* were no longer audible. After eight months' treatment the patient was discharged to return to his occupation as a laborer. The hemocytes were nearly uniform in size, only a few of them showing a slight "tailing" and no megalocytes were present, there was no excess of the leucocytes or of blood plates, and good rouleaux were formed on the microscopic slide. Inasmuch as it has been demonstrated by physiologists that the colored blood corpuscles are derived from the large, pale cells in the red marrow of bones, especially of the ribs, Dr. Fraser's treatment is especially happy in theory, and apparently successful in this one case.—*A. M. Practitioner.*

PERISCOPE.

IN CHARGE OF WM. E. PARKE, A.M., M. D.

MEDICINE

Two Easy and Delicate Tests for Albumin in Urine.

Dr. C. Fouchlos (*Progres Medical*) recommends two new tests for albumin in urine, for which he claims utmost delicacy and absence of any possible fallacy.

1. Add to the suspected urine a few drops of a 1 per cent. solution of corrosive sublimate; in case of turbidity, add some drops of acetic acid. If the turbidity persists it is due to the presence of albumin.

2. Take 100 cc. of a 10 per cent. solution of sulpho-cyanide of potassium, and mix with it 20 cc. of acetic acid. Add a few drops of this mixture to the urine. If albumin is present in small quantities, an immediate turbidity will ensue; if in large quantities, a heavy white precipitate will appear.—*Med. Review.*

Stomach Washing in the Treatment of Alcoholism.

In an article on the treatment of the alcohol, opium and cocaine habits, Dr. Heine Marks, the progressive surgeon in charge of the St. Louis City Hospital, says in the *Courier of Medicine:*

In cases of acute alcoholism, where a quick restoration to a normal condition is necessary or desirable, I have devised a plan which has never failed to prove efficacious. This is simply washing out the stomach. The apparatus for this purpose consists of a glass funnel inserted in the end of a rubber tube leading into the stomach. Through this I pour plentiful quantities of salt water, until vomiting ensues and the stomach is thoroughly washed out. The patient is then placed in a hot bath and afterward immersed in cold water. In fifteen minutes he is comparatively sober and the next morning perfectly so, and steady too. By this device I have been able to dispense with salts, bromides, chloral and other drugs. This treatment arrests gastritis, and, in experienced hands, never fails of accomplishing the desired result, though in inexperienced hands it might be attended with great danger.—*St. Louis Clinique.*

Rubidium Iodide in Skin Disease.

Dr. Leo Leistikow, of Hamburg, has advantageously used the above salt in a number of cases of secondary and tertiary syphilitic lesions, as well as in a case of gonorrhœal rheumatism. In the case of syphilis complicated with valvular disease, the heart's action was not in the least influenced by the rubidium iodide. Altogether the rubidium salts have no toxic effect upon the heart like the potassium salts. The taste of the rubidium salt is not as disagreeable as that of potassium iodide.—*Medical Review.*

Spray for the Nose and Throat.

In Part Second of "Saunders' Question Compends," No. 14, second edition, just issued, Dr. E. B. Gleason recommends for the purpose of spraying the nose and throat the following formula:

℞ Antipyrin ..... grs. xvi
Aquae ..... f℥j

He says: A solution of antipyrin of the above strength, when sprayed upon the mucous membrane of the nose, pharynx or larynx, has the power of contracting the capillaries and producing an artificial anemia, which effect is maintained for three to five hours. The above solution may be used with the atomizer in all acute inflammations of the mucous membrane of the upper respiratory tract. When used after the application of cocaine to the interior of the nose it will maintain the contractile effect of that drug upon the rectile tissue for several hours when sprayed upon the nasal mucous membrane without the previous application of cocaine, it gives rise to a smarting sensation, which, however, quickly subsides. Applied as a spray within the larynx by means of an atomizer, it contracts the blood vessels of the laryngeal mucous membrane and diminishes secretion, cough and expectoration. It is extremely valuable as a remedy for the night cough of laryngitis phthisica, often securing a night's rest for such patients, who may be provided with an ordinary hand atomizer filled with a solution of antipyrin and instructed to inhale its spray as often as is required to control the cough.

A Hitherto Unnoticed Symptom of Diabetes Mellitus.

Dr. Unschuld (*Berl. Klin. Wochenschrift.*): It is a well-known fact that the diagnosis of diabetes is frequently made only after the disease has lasted for a long time. Years ago Unschuld called attention to three points which frequently mark the course of the disease, namely: (1) Chronic catarrhs of the stomach, especially nervous dyspepsia; (2) certain disorders of sensation in the abdomen, partly explained as hysteria, partly as hypochondriasis; and (3) albuminuria. Since then he has had opportunity to see many hundred cases of diabetes, and has found that one of the most frequent symptoms is cramps in the calf of the leg, a symptom to which hitherto no attention whatever has been paid. These cramps usually show themselves in the morning on waking up or during the night, rarely during daytime. If such cramps are found in persons who, at the same time, complain of weakness and a tired feeling in the morning, the urine should at once be examined for sugar.

The cramps seem to be in no connection with the etiological cause of the disease and

are found in all forms of diabetes. They have no influence upon the course of the disease and usually disappear quickly on the patient getting up and by massage. It is still an unsettled question what they are due to.

Quinine and Pregnancy.

Appended are the deductions from an exhaustive article on this subject in the *Indian Medico-Chirurgical Review* for February, 1894:

1. The existence of pregnancy is no bar to the administration of quinine.
2. For fevers and other affections during pregnancy in which quinine is indicated the effects of the drug are more marked than those of any other.
3. That abortion following the administration of quinine is either the result of the original malady or the effect of idiosyncrasy.
4. That allowing for an idiosyncrasy, in cases in which a tendency to abortion exists and in others as a matter of precaution quinine is best administered combined with a sedative (opium).
5. Hence the old-standing view of the action of quinine on the duration of pregnancy is not borne out by the clinical experience collected in the replies.

Sarsaparilla Must Go.

The general trend of the discussion of the medicinal value of sarsaparilla is that, like the Chinese, it must go The *Medical Record* voices the sentiment of a number of medical men in the following editorial comment:

The esteemed editor of the *Therapeutic Gazette* comes to the rescue of sarsaparilla, and says that it ought to be retained in the Pharmacopœia because it covers the taste of iodide of potassium. This would be rather a weak excuse, even if it were true. But it does not happen to be true, as any one can be convinced by a trial.

The *Gazette* further puts forth the weird hypothesis that sarsaparilla syrup promotes the action of iodide. We venture to say there is not a scintilla of clinical proof that this is the case. The most brilliant results from iodide have often been obtained by enormous doses, after small doses combined with sarsaparilla have failed.

The fact is that the legendary belief in sarsaparilla as a "blood purifier" promotes no end of quackery and useless drugging. Hence physicians, at least, ought to rid themselves of false notions about it.

Pernicious Anemia.

Stengel (*Therap. Gaz.*) says the rapidity of improvement following the use of arsenic stamps it as almost specific. He gives it in the form of Fowler's solution, beginning with two-drop doses, rapidly increasing it to ten drops, and then more slowly to fifteen drops or more. It should always be given after meals. He has seen symptoms of gastric disturbance more frequently subside than become aggravated from its use. Under no circumstances should it be pushed so far as to produce diarrhea. In addition, the patient is at first to be confined to bed, and the diet should be nutritious and easily assimilable. The deficiency of hydrochloric acid in the gastric secretion often requires it to be administered.—*Phila. Polyclinic.*

Treatment of Incontinence of Urine in Children.

Drs. Legendre and Broca (*Revue des Maladies de L'Enfance*), in managing this affection, advise:

1. Examination of the genito-urinary organs for phimosis, stricture of the meatus or hypospadias.
2. Catheterization of the bladder for diagnosis of vesical calculus (rare) or atony of the vesical sphincter.
3. To look for reflex causes—worms, pinworms or too acid urine. This first so-called non-essential variety differs from essential incontinence—incontinence of hysterics and epileptics.
4. Incontinence of central origin, accompanied by enuresis both day and night, and constant mental preoccupation. This form requires suggestive and psychic treatment. Wake the child frequently and have him sleep on a hard bed. Elevate the foot of the bed, avoid drinking in the evening, and educate the bladder to retain the urine during the day. Hydropathic measures, cold sitz baths and ablutions, the general douche, electricity to the hypogastrium and perineum, are indicated. Static electricity is said to act especially upon the sphincter, and may be combined with suppositories of belladonna. This same drug, in pill form, is also valuable. Then, also nux vomica, strychnine and ergot associated with iron, as in the following formula:

℞ Extr. nux vomica, Strychnine, (gr. 1-6) } .....āā 0.01
Extr. ergot, Tartrate iron and potash, (gr. ¾) } .....āā 0.05

For one pill. One to six a day.

The tincture of rhus aromatica has also been recommended from its empiric use (10–100 drops a day).—*Lancet Clinic.*

Treatment of Pruritus Ani.

Dr. A. Berger states that the following method immediately relieves the itching and causes a rapid disappearance of the eczema of the perineum and scrotum which frequently exists in these cases: A cotton pledget, two or three centimeters (¾ to 1¼ inch) in length and steeped in a 2 per cent. solution of hypochlorate of lime, is introduced into the anus. This pledget is allowed to remain until there is a slightly smarting sensation, when it is immediately withdrawn and the anal region washed with the same solution, taking care not to wipe it off afterward.—*International Jour. of Surg.*

A New Symptom Accompanying Enuresis Nocturna.

Sigmund Freund, of Vienna, describes a new symptom which frequently accompanies the enuresis nocturna of children. This consists of a hypertonicity of the adductor muscles of the thighs. It is elicited on an attempt to separate the thighs when the child is sitting with the lower extremities extended on an even surface; marked resistance to passive separation is felt and seen to depend upon involuntary contraction of the muscles named. The same resistance is felt on attempting to flex the leg on the thigh. The observer found no constant relation between the symptoms and the degree and obstinacy of the enuresis. It seemed to occur only with certain forms of incontinence. It is presumed by the author that the enuresis is to be explained by special hyper-innervation of the detrusor vesicæ similar to that that is evidenced by the hypertonicity of the muscles.—*Med. Mirror.*

Is Marriage a Failure?

The Census Bulletin recently published gives the first official data on conjugal life in the United States. It shows that almost three-fifths of our entire population are single, a little more than one-third married, and not quite one-twentieth widowed. The divorces constitute a small fraction at one per cent. The proportion of widows is nearly three times as great as of widowers, indicating that a greater portion of widowers remarry than widows, while figures show that divorced men have remarried to a greater extent than divorced women. The fact that women are, at an earlier age than men, prepared to try the mysteries of matrimony is also proved by the statistics, for while there were only twenty-three males under the age of fifteen who were married, the number of married females under this age was 1,411.—*Kansas City Med. Rec.*

The Specific Gravity of the Urine of the Insane.

After reviewing the labors of several alienists on this point and the variance in their results, Dr. Umberto Stefani, of Padova, made a careful investigation, and studied for one or more months sixty cases of mental diseases, with the following results: In all cases of acute insanity, independent of special forms, the specific gravity ranged from 1030 to 1040, and sometimes higher. If the form is of short duration, the specific gravity will fall as the psychic symptoms diminish, until it reaches the normal, or even lower. When the remission of the psychic symptoms is followed by an exacerbation, the specific gravity of the urine will again increase.

If the course of the disease is long and tends to become chronic, the density of the urine ordinarily will, after a time, commence to diminish until it reaches normal or falls below. In cases of imbecility, paranoia' senile dementia and paresis without spells of excitement, the specific gravity of the urine is not increased. But if continued frenzy and excitement develop, the specific gravity will increase to 1030–1040

The writer throws out the suggestion that in the examination of the urine we have an index, probably, of the prognosis and course of the disease. A table of charts, showing the exacerbations and remissions, adds to the interest of the paper.—*Rivista Sperimentale di Freniatria edi Medicina Legale—Buffalo Med. and Surg. Journal.*

SURGERY.

The Rational Treatment of Appendicitis.

Dr. W. G. Ashton, in the *International Journal of Surgery*, thinks the profession is divided into three classes as regards appendicitis. The first class look upon it as a purely medical disease; the second class are uncertain; and the third class believe that surgery alone is the only rational treatment of this disease. He wishes to show that no one at the beginning knows what course the attack will take, but he believes that all forms are dangerous to life. His conclusions are:

1. That it is impossible with our present means and methods of diagnosis to know the nature of the pathological changes taking place during the course of an attack of appendicitis.

2. That all forms of appendicitis are dangerous to life, as it has been demonstrated that germs pass through the walls of the appendix without the presence of either ulceration or perforation.

3. That surgical interference is indicated in primary and secondary attacks of appendicitis so soon as the diagnosis is clear.

4 That surgical interference is not advised during an acute attack of appendicitis, except when grave symptoms intervene, unless a competent surgeon is at hand. Under these circumstances the case should be operated upon after the so-called recovery.

Hemorrhage After Operations on the Nasal Septum.

Dr. A. C. Getchell, in the *Boston Medical and Surgical Journal*, reports several cases of serious hemorrhage after operations on the nasal septum, from which he concludes that:

1. Operations upon the nasal septum may be followed by hemorrhage sufficient to very materially affect the health of the patient.

2. The artery of the anterior (cartilaginous) septum may lie near the surface, be of considerable size, and if atheromatous may cause serious hemorrhage.

3. Operations upon the nasal septum in adults should be advised only after carefully considering the good to be accomplished and the possible risk incurred.

Treatment of Mammary Abscess.

Paul F. Munde (*The Int. Med. Annual*): My method is very simple, and its simplicity has required but very little modification since its inception. It consists in the proper selection of the case (viz., a fresh abscess, not an old, neglected necrotic cavity), a *large* flat, coarse bathing sponge, two large three-cornered cloths (unbleached muslin or very large square handkerchiefs, folded from corner to corner) or a broad, long roller bandage, a piece of oiled silk large enough to cover the sponge, and some large safety pins. The modus operandi is as follows: The patient presents herself with a large fluctuating abscess of the breast; this is opened by one moderately large radiating incision at the most dependent point, the pus is gently expressed, and the abscess cavity irrigated with a 1 to 10,000 bichloride solution or, what is probably just as good, plain boiled (sterilized) water, all of which is gently squeezed out, and the abscess cavity closed by gentle manual compression by the patient herself, while the other dressing is being made ready. The sponge, which has been previously thoroughly cleansed by boiling and has been freed from sand and other impurities, is now fitted to the shape of the collapsed breast by hollowing it out in the center with scissors so as to admit about one-half of the organ. It is then soaked in as hot water as can be borne by the hand, rapidly squeezed out in a towel, placed over the breast so as to entirely envelop it, covered with the piece of oiled silk, and then uniformly compressed against the thorax with the roller bandage or with the two three-cornered cloths, the first cloth being applied over the lower part of the breast and tied or pinned behind the neck, the other straight around the thorax. Compression should be as tight as the patient can comfortably bear. The other breast, I must not omit to mention, must be protected by a covering of cotton wadding. This dressing is left undisturbed until the next day, except, if necessary, tightening the bandages as they become loose. On the following day the whole dressing is removed, the sponge washed in hot water and reapplied as at first, and this procedure is repeated every day until the abscess is completely healed, which in my experience has seldom been longer than a week. Indeed, the cavity is usually closed after the third daily dressing; but to avoid possible pocketing of pus through uneven application of the compression, it is well to examine the breast carefully each time, and if such pocketing is found, either express the pus through the original incision or make a new opening. I have never had this to occur when I myself applied the dressing, for I have always been particularly careful to adhere to the indispensable axiom of success —that is *uniform, even compression of the breast from the periphery towards the center and from the surface toward the thoracic wall.* Nursing from the sound breast should be suspended until the sick breast is well. The author states that he has used this treatment in every *fresh* case of mammary abscess which has come under his observation in the last eighteen years, and in not a single instance has he failed to achieve a prompt cure.

Thombosis of Veins of the Lower Leg Following Operation in the Trendelenberg Position.

V. Strauch, Moscow (*Centralblatt f. Gyn.*), reports three cases of this distressing complication as occurring in nineteen celiotomies, one of the three being still further complicated by pulmonary embolism, from which the patient happily recovered. The author ascribed the condition partly to the use of ether instead of chloroform, but chiefly to the acute flexion of the leg in the ordinary Trendelenberg position, and now intends to use a table of his own device on which the patient lies with the pelvis elevated but the leg extended. In the same journal Czempin, Berlin, describes his table, which seems to accomplish this result very efficiently.—*Archives of Gynecology.*

Excision of the Initial Lesion.

The early cure of syphilis, if such a thing be possible, is greatly to be desired. Dr. Edmund E. King, in the *Medical News*, makes a plea for the excision of the initial lesion of syphilis. By the early excision he claims that the disease may be aborted and by a later excision the secondary symptoms are moderated. This excision must be done boldly and the cut edges made to unite by first intention. The system is probably infected subsequently to the development of the initial lesion. The lesion should be excised under the strictest antiseptic precautions and the edges cauterized with pure carbolic acid. In his paper he draws the following conclusions:

1. That the early excision of chancres—that is, within a few hours after their appearance —will abort the disease.

2. That the excision of any unhealed chancre will moderate the subsequent secondary manifestations.

3. That excision constitutes the cleanest, least painful and most scientific method of treating the lesion.—*Maryland Med. Journal.*

Cream of Tartar in the Treatment of Gonorrhea.

Dr. Oteri (*Journal de Medecine de Paris*) has employed the cream of tartar in 280 cases of gonorrhea, buboes, chancres and operations on the prepuce. On account of its mild action it is of service in urethral injections, even to five a day. It subdues the inflammation and arrests the discharge. It is possessed of eminent antiseptic and absorbent properties. In profuse suppuration in wounds or cavities with sinous or necrosing walls it will yield good results if applied locally. In buboes, chancres and syphilitic ulcerations, as well as in balanitis, he has found it a good local application. It is cheap, devoid of odor painless, and easily handled.—*Lancet Clinic.*

Diseases of the Heart Muscle in Typhoid and Scarlet Fevers and Diphtheria.

Romberg (*Deutsche Archiv. fur Klinische Medicin*) concludes that the highest grades of parenchymatous degeneration of the heart muscle are present by the end of the second week in typhoid fever, then slowly disappear in the later weeks; interstitial myocarditis begins mostly at the end of the second week, while in scarlet fever it begins mostly on the fourth day, becoming excessive in middle of second week; in diphtheria degeneration begins at the seventh or ninth day, and reaches its highest development at the end of second or beginning of third week, except the characteristic fatty degeneration of diphtheria, which begins often very late. During fever, irregularity and smallness of pulse and dilatation are marked; the best sign of the latter is the galloping rhythm. This is an important physical sign. Amount of urine is usually diminished, slight albuminuria with or without hyaline casts. A bad prognostic sign in diphtheria is a very slow pulse.—*Medical Fortnightly.*

Preparing the Hands for Obstetrical Work.

I have been for some time past, when called to a case of abortion or labor at full term, in the habit of first washing my hands in coal oil and then in warm water, the time occupied not being over three minutes. Time is often of great importance when hemorrhage is profuse, and as kerosene is to be found in every household, there is no time lost in procuring it. After preparing my hands in the above-described manner, I curette the womb with my finger-nail in incomplete abortions and manipulate it in any other way that is necessary without fear of sepsis. Petroleum is of a most penetrating and detersive nature; it will loosen a tap from a bolt in a few hours that has been rusting on it for years.

Coal oil was used by the Persians for illuminating purposes over two thousand years ago and may have been used in obstetrical practice also, but I have seen no mention made of it and I do not believe it is even now in general use, if used at all, for the latter purpose.—*Maryland Med. Journal.*

Fixation in Fractures into Joints.

Dr. Ansel G. Cook, of Hartford, advocates in the *International Journal of Surgery* the fixation of bones in the treatment of fractures into joints, and maintains that there is no fear of ankylosis. His conclusions and rules of treatment are:

1. That bony or serious fibrous ankylosis is the result of injury and subsequent inflammation and not of immobilization.

2. That early passive motion only disarranges the fragments of bone, thereby increasing the production of callus, that it irritates the injured ligaments, and, by increasing the inflammation, tends to produce the ankylosis it is thought to prevent.

3. Immobilization is useful *only* when active inflammation is present, or until the ruptured ligaments and broken bones have thoroughly united.

4. The logical treatment of a fracture into a joint, therefore, should be rest and local applications to reduce inflammation. Reduction of the fracture as early as possible, then immobilization until the bones and ligaments have united (from three to eight weeks, or more, according to circumstances).

5. Passive motion, massage and use till the tissues become normal, or, if the massage fails, complete rupture of all adhesions under an anesthetic. The factors which will ultimately determine ankylosis are the nature of the original injury, the character and duration of the subsequent inflammation, the destruction of bone and cartilage, cicatricial contraction of the soft tissues around the joint, and the age and condition of the patient.—*Maryland Med. Journal.*

For Hæmorrhagic Diarrhœa.

℞ Pulverized alum.....
Catechu, of each..... 5 grains

M. and make four pills.
Sig.: Three to six pills per day.

℞ Alum.....
Catechu, of each..... 2 grains
Crude opium..... ¼ grain
Syrup of red roses.....q. s

M. and make one pill.
Sig.: Twelve pills per day.

OBSTETRICS.

Chloral Hydrate in Labor.

Chloral hydrate, says Dr. John E. Gardner (*Lancet*), has a great effect in assisting dilatation of the os uteri and relaxing the rigidity of the perineum. No post-partum hemorrhage follows, nor is there any delay or difficulty in the expulsion of the placenta. The chloral, I think, might take the place of chloroform, if given in a small repeated dose during the long and tedious labor of the primipara. It does not seem to diminish the expulsive power of the pains, as I have often noticed in chloroform cases. I submit that the chloral might be further tried in place of chloroform in primiparæ in order to relieve the rigid perineum and so avoid having to use forceps. Chloroform, in my experience, is attended with a great tendency to post-partum hemorrhage, which I have never seen after the use of chloral in labor. For many years, I have from time to time experienced its boon to the poor, worn out and anxious mother, despondent with fear. After a dose of the chloral the frenzy passes off, and the patient settles down to her travail, which has a happy and speedy result.—*St. Louis Clinique.*

Superfœtation.

Dr. E. C. Boyle, in the *Charlotte Medical Journal*, reports that after delivering a woman at full term, and expelling the placenta by Crede's method, there followed, in a separate sac, a fœtus apparently three or three and one-half months old. The two placentæ were apparently attached to each other at their margins by a substance resembling the jelly of Wharton, but the circulation in each was independent—there was no anastomosis between the vessels. Both the fœtus and its placenta were normal.

Fetal-Placental Circulation During Parturition.

Caviglia (*Nouvelles Archives d'Obstet.*), after a series of careful observations, has arrived at the following conclusions:

1. Blood passes from the placenta to the child, during the process of birth, through uterine pressure, retraction and sometimes contraction.

2. The constant positive pressure of the fetal vena cava superior forms a resistance opposed to the passage of placental blood by the fetal organism. This resistance is inferior, however, to the force acting upon the placenta and is not sufficient to prevent the afflux of blood.

3. Respiration takes away cardiac force and blood from the systemic circulation, hence it diminishes venous pressure and the special resistance referred to in the second conclusion.

4. The afflux exists but to a slight extent in cyanotic asphyxia, owing to the high blood preesure in the venous system of the child.

5. The arrest of the fetal-placental circulation does not depend upon the diminution of pressure in the fetal-arterial system, but on the occlusion of the placental capillaries by uterine pressure. When the placenta is expelled early the pulsation may continue almost indefinitely.

6. The passage of blood from the placenta to the new-born child often continues after the umbilical arteries have ceased to beat.

7. During the first moments after birth the child's weight occasionally diminishes, on account of relaxation of the uterus. Too early ligature, therefore, involves the risk of removing from the child's circulation not only all the reserve blood, but also some of the blood necessary for the child at any given moment.

The two last conclusions are important in practical obstetrics.—*Archives of Gynecology.*

Painful Dyspepsia.

℞

Bismuthi subnitrat.....	gr. x.
Magnes. carbonat.....	gr. xv.
Liq. potassæ.....	mx
Acid. hydrocyan. dil.....	miij.
Tinct. zingiberis.....	mv.
Aq. menth. pip.....q. s ad.	fʒj.—M.

For one dose. To be repeated two or three times daily. Shake well.

—*Therapeutic Gazette.*

Asthma.

℞

Ammon. iodid	ʒij.
Fl. extr. grindel. rob.....	fʒss.
Tinct. lobeliæ	āāʒj.
Tinct. belladodnæ	
Syr. pruni virgin.....	fʒj.
Aq. destill.....	fʒij.

M. Sig.: Teaspoonful three times a day.

—*Med. Review.*

Diagnosis of Pregnancy.

Lawson Tait, in a clinical lecture, points out the great difficulties experienced in obtaining truthful and correct histories from illegitimately pregnant women, and the great caution to be exercised by the obstetrician examining such patients. Several interesting cases are reported from his great experience, in which he himself and others have had but narrow escapes from grave errors in diagnosis through the untruthful histories given by patients. In closing, he recommends the greatest care to be exercised, particularly in regard to the matter of asking questions as to the absence of menstruation. A question should be put in as casual a manner as possible as to when the last period took place; if within a month, exercise the utmost caution to prove that the case cannot be one of pregnancy. The great probability is that it is not one; but the patient may be untruthful, and even regularly recurring menstruation is not incompatible with pregnancy. If the answer given is to the effect that the last period was some months previous to the date of examination, and if the abdominal tumor is of a size which would be that of a pregnant uterus of corresponding date, the chances are infinitely in favor of pregnancy. It should also be ascertained whether menstruation was regular previous to its cessation, and if the ceasing was an abrupt one. If the latter, and the previous menstruations have been regular, the certainty of the diagnosis of pregnancy is complete. If the previous menstruations have been irregular and the cessation not sudden, the history altogether fails, and may be entirely neglected. It should be borne in mind that the adolescent anæmia of young girls suspends their menstrual flow almost invariably, but it does not necessarily interfere with their productive capacity.

The diagnosis of pregnancy is a perplexing question not only in the illegitimately pregnant woman. Even in cases where the patient gives an honest history as far as it is in her power, it is sometimes impossible to tell before the movement of the child is felt. The most careful physicians slip up once in a while on this point, sometimes in what appear to be positive cases.—*Massachusetts Med. Jour.*

Blood in the Secretion of the Mammary Gland.

At a meeting of the Society of Physicians of Warsaw, Dr. Wassilieff exhibited a woman in whom the ducts of the right mammary gland gave exit to milk mixed with

blood. The woman, 30 years of age, had been four times confined. The last accouchement was two years ago, and a year later she had weaned her babe. The flow from the breast, a mixture of blood and milk, had begun a month previously, and its daily amount could not be exactly determined. Microscopical examination revealed the presence of fat-globules, cells in a state of fatty degeneration, and more or less altered blood-corpuscles. There was nothing abnormal as regards the general health or the genital organs. The menses were regular.

Vaginal Secretions in Pregnancy.

Konig (*Amer. Jour. Obstet.*) states that he has found in the lochia the streptococcus most frequently, and but seldom the staphylococcus aureus, and never the staphylococcus albus. After considering minutely the reaction of the vaginal secretion, which in 300 pregnant women he found to be distinctly acid, he concludes that in pathological conditions the secretions attain a much higher degree of acidity, so that the streptococcus pyogenes can hardly thrive therein; at least he was unable to obtain cultures of this germ. He further concludes that the vaginal secretion of every untouched pregnant woman contains nothing pathogenic, the thrush or gonococcus germ excepted. Both are bacteria which upon the usual media of culture are aerobic at the body temperature. The vagina of every untouched pregnant patient is therefore aseptic. Vaginal injections of antiseptics are dangerous in the ordinary patient, as they may chemically lessen the resistance of the tissues to bacteria, and increase the intensity of septic endometritis by washing bacteria into the uterine cavity. —*Medical Standard.*

THERAPEUTICS.

Treatment of Diphtheria.

Weibgen (*Deut. Med. Woch.*, July 19, 1894) describes the treatment pursued in Hahn's clinic since 1880. During the past few years it has been customary to apply an ice collar, and to order hourly gargling with a 4 per cent. solution of potassic chlorate, or, if much fœtor is present, with a ½ per thousand solution of potassic permanganate. If gargling is impossible a spray is used. In nasal diphtheria the nose is syringed out with boracic acid (2 per cent.) or the above-named permanganate solution; if bleeding occurs the nostril is plugged. In mixed infections it is said that large rectal injections (boracic acid 2 per cent.) are useful. If signs of laryngeal obstruction are present on admission it has not always been found necessary to do tracheotomy, as these symptoms may subside under the use of steam. If, however, the dyspnœa is urgent, and the child weak and somnolent with retraction of the soft parts, a low tracheotomy is performed at once. Pneumonia is not a contra-indication to tracheotomy, but marked sepsis is, the dyspnœa here being often due to the infection. The cannula is removed about the fifth or sixth day. If, owing to paralysis, the food gets into the larynx, the cannula is put in again. Sometimes it has been found necessary to feed the patient with a tube. The number of recoveries has steadily increased from 46 per cent. in 1880 to 63 per cent. in 1893 among the non-tracheotomized, and from 20.5 to 40 per cent. among the tracheotomized. The earlier in the disease the child was admitted the better the prognosis. Sixty-five cases have been treated with the specific serum; of these, 72 per cent. of the non-tracheotomized and 44 per cent. of the tracheotomized recovered. The epidemic, however, was of a mild type, and the author says that similar good results have been obtained in previous years in like epidemics. A definite conclusion upon the serum treatment cannot be given until larger numbers are forthcoming, and until the treatment has been in use over longer periods of time (see *Epitome*, May 5, 1894, par 365).—*British Med. Journal.*

EAR, NOSE AND THROAT.

The Treatment of Chronic Suppurative Otitis Media.

Bacon (*New York Eye and Ear Infirmary Reports*) says the usual treatment employed in the simple, uncomplicated cases is syringing the ear with warm water once or several times a day, according to the quantity and character of the discharge, and the instillation of the following drops:

℞ Zinci sulph..... gr. ii to gr. iv.
Acid boracic..... gr. x.
Aq. destil..... ʒ i.
M.

Other drops used were those containing sulphate of copper or acetate of lead, which should be used when the discharge is not checked by sulphate of zinc.

When small granulations are present, these should be cauterized with nitrate of silver or chromic acid fused on the end of a probe, but when they are of large size or associated with caries, they should be thoroughly removed with Blake's snare or with curettes.

For small polypi or granulations the so-called alcohol treatment, consisting in the instillation of alcohol and boracic acid (20 grains to 1 fluid ounce), is very successful in some instances, while in the treatment of granulations arising from carious walls he has met with marked success in the use of alcohol and iodoform (20 grains to 1 fluid ounce). With some patients it will be necessary to dilute the alcohol one-half with water, as they otherwise complain of pain after the instillation of the drops.—*Thera. Gazette.*

GYNECOLOGY.

The Treatment of Rupture of the Uterus.

Merz (*Archiv. fur Gynakologie*) describes two cases of rupture of the uterus which came under his observation, and tabulates all the hitherto published cases, giving an analytical review of them. In fifty-four cases celiotomy was performed with 48.1 per cent. recovery. He arrives at the following conclusions:

1. If only the trunk and extremities of the fetus have escaped into the abdominal cavity, and the head lies over the pelvis, the woman should be delivered *per vias naturales*, either with the forceps or by perforation and craniotractor.

2. If the head of the fetus or the whole body has escaped into the abdominal cavity, version and extraction, as frequently advised, should not be attempted, but celiotomy should be done at once, and the fetus delivered through the abdominal incision.

3. In the latter case the rupture should be carefully sutured.

4. If the woman has been delivered *per vias naturales* and the conditions are very favorable, celiotomy and suture of the rupture should follow the birth immediately.

5. If the conditions are not favorable, then drainage with iodoform gauze without irrigation should be employed.

6. If the uterus is markedly degenerated, or if septic endometritis has developed, a Porro operation should bed one.—*University Medical Magazine.*

Ventro-Fixation of the Uterus.

After reporting some cases of ventro-fixation, Sinclair (*Medical Chronicle*) concludes a thorough paper upon this subject as follows:

1. The various published series of cases show that the element of danger is almost *nil*. The present writer's series supports this opinion.

2. The operation, efficiently performed, is a permanent cure of the troubles arising from chronic retroflexion of the uterus, complicated with adhesions or inflammatory affections of the tubes and ovaries.

3. When pregnancy occurs after the operation no distress is experienced by the patient and no unusual phenomena are observable during pregnancy, parturition or the puerperal state.

4 Contrary to what might be expected, bladder troubles are quite the exception after the operation, and these discomforts are almost certainly avoidable by care in operating.

5. In a certain proportion of the cases ventral hernia occurs at the site of the cicatrix. How this is to be prevented is one of the problems of the future.

6. After making full allowance for the element of risk and the incidental drawbacks, the operation of ventro-fixation is not only justifiable, but it is indicated in a certain class of cases of retroflexion of the uterus with complications.—*Med. Review.*

OPHTHALMOLOGY.

Affections of the Eyes in Relation to Gynecology and Obstetrics.

Ramsay, of Glasgow, states that at puberty there is an increasing frequency of inflammatory diseases of the cornea, sclerotica, iris and choroid as well as retina and optic nerve. Sharpness of vision and the field of vision is diminished two or three days before menstruation and is most marked on the third or fourth day. The sense of color, especially green, also suffers. Vicarious menstruation in the bulb often has been observed. The most important eye affection of pregnancy is the so-called albuminuric retinitis, consisting in either temporary complete blindness without any marked affection of the retina, or in characteristic lesions of the optic nerve and retina without noticeable loss of vision. The latter is more or less persistent and may in complications with uræmia cause permanent blindness. In the so-called albuminuric retinitis of pregnancy the disease may be limited to one eye, but in chronic nephritis both eyes are usually affected. Separation of the retina may occur with or without albuminuric retinitis. The prognosis is generally favorable. In the puerperal period embolism of the central retinal artery has been known to occur, also ophthalmia and atrophy of the optic nerve after severe hemorrhages. Atrophy of the nerve has been observed in the nursing period with frequent child-bearing also episcleritis in long-continued lactation and stoppage of the tear duct with formation of abscesses. The vitality of the cornea is also lowered by long-continued nursing and slight injury to it may result in protracted suppuration.—*Centralblatt fur Gynakologie.*

New Sign of Lead Poisoning.

In eighteen out of twenty persons affected with lead poisoning M. E. Destree (published in the *Journal de Medecine de Bruxelles*) has observed a narrow zone of hyperesthesia at the level of the articulation of the manubrium with the ensiform cartilage. As a general rule, pressure on the sternum is readily painful only under one or two conditions—namely, when the bone is diseased, as is the case in leucocythemia with lesions of the bone marrow, or when the thoracic wall and the skin are hyperesthetic, as happens in hysteria, sometimes in neurasthenia, and often in chronic alcoholism. But in these latter cases the hyperesthesia is not found to be so limited in extent as it is in lead poisoning. Saturnine hyperesthesia is indeed a symptom of nervous origin, comparable to the intercostal neuralgias observed by Rosenthal. "There is nothing astonishing," says the author, "in the fact that the sternal hyperesthesia is so precisely marked, when we remember that Beau has shown that there is never any anesthesia at the level of the scrobiculus cordis in lead poisoning, and that in lead colic there is very decided hyperesthesia of the abdominal wall."—*New York Med. Journal.*

A Means of Preventing Hemorrhage Consequent Upon Ablation of the Tonsils.

Dr. W. Ward states that this may be accomplished by practicing deep interstitial injections into the tonsils of the following solution:

℞	Sulphate of iron	gr. xv
	Dissolve in:	
	Distilled water	ʒijss
	Add:	
	Hydrochlorate of cocaine, 10 per cent. solution	ʒijss

F. S. A.—For external use.

From thirty to sixty minims of this solution are injected into each tonsil, after which, it is said, scarcely any hemorrhage follows extirpation of the glands.

BACTERIOLOGY.

The Transmission of Bacilli Through the Placenta

from the mother to the fetus is a question which has invoked considerable interesting discussion among pathologists since the causation of disease by micro-organisms has been definitely settled, for hereupon rests the explanation of many of the apparently hereditary diseases. I say apparently hereditary advisedly, for but few would be willing to assert that any of the known micro-organisms are transmitted in a true hereditary manner either through and within the spermatozogoon from the male parent or through and within the ova of the female. This and this only can be true heredity; all received after their junction must in the natural order of development be acquired.

During the earlier investigations on this subject the placenta was believed to present an impenetrable barrier to the progress of micro-organisms toward the fetus, and various theories were advanced to explain the apparent discrepancies; but more recent experiments, especially those of Malvoz and Juequet, have shown that when injuries have been received by the placenta the point of injury may form a point or open door by which pathogenic organisms may gain entry to the fetal organism and there commit their ravages.

The frequency with which the placenta receives injuries can be verified by any obstetrician by a careful examination of placentæ as they are received in his practice, and one would wonder that more cases of apparent heredity do not occur; but rarely indeed can you find an infant that shows unmistakable evidence of tuberculosis, especially at birth. While the books contain vague references to tubercular fetus, we find but one instance recorded in which a systematic examination was made. In this case bacilli were found in the placenta, but not in such positions as to indicate that they had been received from the mother, leaving the question resting upon the experiments above referred to, making true heredity extremely improbable, apparently possible, but rare.—H. C. F., *Columbus Med. Journal.*

ARMY AND NAVY.

CHANGES IN THE U. S. MARINE HOSPITAL SERVICE FOR THE FOUR WEEKS ENDING SEPTEMBER 22, 1894.

Fessenden, C. S. D., Surgeon. Granted leave of absence for thirty days, September 12th, 1894.

Murray, R. D., Surgeon. To proceed to Beaufort, S. C., on special duty, September 20th, 1894.

Bailhache, P. H., Surgeon. Detailed to represent service at meeting of American Public Health Association, September 21st, 1894.

Vansant, John, Surgeon. Granted leave of absence for thirty days, August 30th, 1894.

Hutton, W. H. H., Surgeon. Relieved from Quarantine Inspection duty, and ordered to rejoin station, Detroit, Mich., September 12th, 1894. Granted leave of absence for thirty days, September 20th, 1894.

Sawtelle, H. W., Surgeon. Granted leave of absence for five days, September 14th, 1894.

Gassaway, J. M., Surgeon. Granted leave of absence for one day, September 17th, 1894.

Banks, C. E., Passed Assistant Surgeon. To report at Bureau for temporary duty, September 10th, 1894. Detailed to represent the service at meeting of American Public Health Association, September 21st, 1894. Relieved from temporary duty at Bureau, and directed to rejoin station (Portland, Maine), September 22d, 1894.

Carmichael, D. A., Passed Assistant Surgeon. Granted leave of absence for thirty days without pay, September 6th, 1894.

White, J. H., Passed Assistant Surgeon. Detailed as chairman Board to locate Quarantine station, South Port, N. C., September 13th, 1894.

Bratton, W. D., Passed Assistant Surgeon. To proceed to Wilmington, N. C., for duty, August 27th, 1894.

Wertenbaker, C. P., Passed Assistant Surgeon. To assume command of Delaware Breakwater Quarantine station, August 27th, 1894.

Stimpson, W. G., Passed Assistant Surgeon. To proceed to Port Townsend, Washington, and assume command of Quarantine station, September 10th, 1894. Granted leave of absence for five days, September 15th, 1894.

Brown, B W., Passed Assistant Surgeon. To report at Washington, D. C., for duty, August 31st, 1894. Detailed as Acting Chief Clerk Marine Hospital Bureau, September 21st, 1894.

Houghton, E. R., Passed Assistant Surgeon. Granted leave of absence for seven days, September 19th, 1894.

Eager, J. M., Assistant Surgeon. To proceed to Mobile, Ala., for temporary duty, September 11th, 1894.

Strayer, Edgar, Assistant Surgeon. To proceed to Pittsburg, Pa., for duty, August 31st, 1894.

Prochazka, Emil, Assistant Surgeon. To proceed to Detroit, Mich., for duty, September 10th, 1894.

PROMOTION.

Rosenau, M. J., Assistant Surgeon. Commissioned as Passed Assistant Surgeon, September 4th, 1894.

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ORIGINAL ARTICLES.

PROPHYLAXIS IN CHURCHES NEEDED BY THE ADOPTION OF INDIVIDUAL COMMUNION CHALICES OR CUPS.*

HOWARD S. ANDERS, A.M., M.D.,† Philadelphia.

It may seem like an invasion of the sacredness of religion for sanitary science to prescribe and recommend certain modifications in the administration of a church ordinance which has had the sanction of general usage for centuries among most intelligent Christian congregations and their pastors. Be this as it may, it is not for sanitarians to leave a stone unturned in their quest for facts and principles, for ways and means by which humanity may be led to suffer less from disease and live healthier, stronger, happier and longer. This applies intrinsically to the welfare of those cherished by and cherishing the higher, spiritual life as well as the secular.

Seemingly an unwarranted intrusion, the change urged in this paper is, nevertheless, actually an innovation; and more, it is—as I hope to prove—a sanitary improvement of a sublime Christian ordinance, and not a sacrilegious, though scientific, proposition. When it is recollected that more than ten millions of people of a nominally Christian nation signify their faith many times a year by participating in a service at once beautiful, solemn, symbolic, but, by reason of certain hazardous conditions in its practice, unhygienic, too, the scope and magnitude of this topic may readily be conceived. It is rather remarkable that the possible and occasionally probable transmission of disease by the use of the communion chalice has not been ventilated publicly until quite recently. (You all know the trite observation regarding the late apprehension of the simplest facts.) But the pace has been set, and the wholesome movement is spreading throughout the United States with rapid strides.

According to its present status, my theme divides itself naturally into three parts—namely, the historical, the rational or explanatory, the practical and suggestive.

1. Historical.—It is not unlikely that the use of individual communion cups for the wine dates back to the time when Christ himself instituted the communion for his disciples and subsequent followers. The Oriental drinking customs at that era were likewise unwittingly hygienic in this respect. These statements are in accord with some of the best biblical historians, exegetists, and critics, and I have been assured by several learned and progressive divines that there is absolutely no scriptural objection whatever to a reversion to the individual communion chalices, particularly as cleanliness (which is next to Godliness) and the conservation of health

*Read before the Philadelphia County Medical Society September 26, 1894.

†Lecturer and Clinical Instructor on Physical Diagnosis, Medico-Chirurgical College, and Physician to the Samaritan Hospital, Philadelphia.

would thus be promoted. I may refer here to the classic painting of "The Lord's Supper," by Da Vinci, who represents each disciple with his own cup. How long or to what extent this ordinance was practiced as instituted it is difficult to say and irrelevant to the purpose and province of this paper. Suffice it to note that in most Protestant churches of to-day the habit at a communion service is for the communicants to partake of the wine from but one or several chalices respectively. Since it often happens that hundreds of persons receive the wine from the same cup, and since the virus of certain infectious diseases may be present in the oral secretions of some, their transference to others by this contact at the rim of the cup is quite possible.

This is the condition which faces the sanitarian, the problem which calls for solution. Fortunately, the latter is easy, and its results reasonably efficacious. The questions which offer themselves embrace several aspects in connection with the anticipated prophylaxis, and may be expressed as follows: Is there a real danger of the transmission of disease from mouth to mouth in the observance of communion by the use of a common cup or cups? If so, what diseases, and of what gravity are they? Have any cases of sickness thus arisen? Would an individual-cup system obviate these dangers? Would its adoption detract from the impressiveness of the spiritual intent of the service? In short, is it at once practicable and practical?

If one may be permitted to estimate rightly the decision of recent events, the above questions are now virtually answered by several churches and hundreds of worshipers. Though the actual substitution of what has been fitly termed the individual communion cup for the common one is only in its inception, the appreciation of the idea is more advanced, as recent newspaper agitation shows.

But to Dr. Chas. Forbes,* of Rochester, N. Y., we are indebted for having first investigated scientifically the dangers lurking in the communion chalice, detected them, and then designed suitable means of obviating them. His report to the Rochester Pathological Society was adopted, with resolutions recommending most strongly to the various churches the modification to the individual cups.

This brings us, then, to the fundamental argument for the proposed change.

2. RATIONAL.—(*a*) *Reasoning by induction,* the inference is logical that if certain microbes are discovered in the wine taken from a common chalice used at communion, and those microbes are known to be pathogenic, then such wine so used is a menace to the health of the participants, provided, of course, that the wine was uncontaminated before it was passed to the members. Evidence, both bacteriological and clinical, is not wanting to verify the premises.

Dr. Forbes found in the dregs of a common cup contamination from two sources, viz., the mouth and clothing. From the former epithelial cells, bacillar spores and various bacteria, and mucus; from the latter, fibrous material. Control experiments showed the unused wine to be practically sterile. He referred, also, as illustration by analogy, to an epidemic of diphtheria which occurred recently among twenty-four families of Rochester, and the origin of which was traced clearly to a common drinking-cup which all of the sick had used. The bacilli of Loeffler were found in great numbers in the wipings from the cup's rim. Again, a fatal epidemic of the same disease in San José, Cal., was traced to a common communion chalice contaminated by a man sick with the malady in its early stage.

About June 1st of the present year, in the laboratory of the Medico-Chirurgical Hospital, I completed, with the kind aid of Dr. C. L. Furbush, a bacteriologic examination of the dregs from an ordinary communion chalice used by many communicants at a service in the Fourth Baptist Church of this city. Five slides were prepared from agar-agar cultures, the specimens stained after the Ziehl-Neilson method, and in two preparations several tubercle bacilli were found. Other preparations made from sterile bouillon media revealed the pus staphylococci. Microscopical examination of the dregs direct showed numerous pus-cells and an abundance of pavement epithelium, along with the ovoid, purplish cells of the grape. *Verbum sapienti sat.* "A word to the wise is sufficient."

But if this is one instance, may there not have been hundreds in the course of

*Passed Assistant Sanitary Inspector U. S. Marine Hospital Service, Health Officer of the Port of Genesee, N. Y.

time when health and life have been jeopardized, interrupted and sacrificed in apparently inexplicable fashion? Innocently and religiously may have been these sacrifices in the past—in the black background of the historical panorama where stalked with prevailing tread the figures of cruel fanaticism, bigotry, ignorance and superstition. But is it religious heroism to suffer needlessly the martyrdom of bacillar attacks while we are strong in prophylactic defense as well as able in knowledge? I ask, is it reasonable, is it safe, is it right or God-forbidden to continue the administration of an ordinance which exposes so many to the possibilities of infection? Furthermore, while it is manifestly difficult to prove the origin of many cases of sickness from a common communion chalice, and while positive proof of but one case would be sufficient reason for systematic prophylaxis and the use of the individual chalice, yet even this is *unnecessary* to justify the change in the light of our present knowledge.

(*b*) *Reasoning by Deduction.* The second part of the argument is then naturally in order, and need not be elaborate. That there are certain underlying principles of hygiene applicable to this subject and all-sufficient for the result desired, namely, the prevention of transmission of disease through the medium of a common chalice, you are all well aware. Cogent reasons for prophylaxis in churches regarding this ordinance may be deduced by analogy.

Truth is truth everywhere, whether in the natural or spiritual world. It is stable, harmonious. The truths of hygiene are of incomparable value to the welfare of all; he who heeds them not suffers, and soon is not. There are many truths yet to be discovered and applied, and many just growing into recognition and pleading for utilization for humanity's sake. The latter embraces this need of prophylaxis in the use of a common communion cup.

We do know that certain pathogenic microörganisms and their corresponding viruses or ptomaïnes are communicable and inoculable, from mouth to mouth, by direct contact, or intermediate, as with a common drinking vessel; that the various habits of life and customs of society, laxity in prudence and precaution, and what-not, are insidious auxiliaries in the matter of infection; and that the practice of sanitary principles erects a hidden but potent barrier between the besieging microphytes and man, the besieged. The true spirit in churches cannot but lead it to adjust itself in the observance of a sacred ordinance so that a helpful truth of hygiene shall not be violated, but contribute indirectly to the good being wrought for the higher nature of man, by keeping the mind sound in a *sound body*. Indeed, it would seem to be wrong and unchristian not to make use of knowledge which in any way aids in preventing or alleviating human suffering.

The fundamental principle in this movement, then, is the prevention of disease and that for which we should contend most earnestly: a principle of medical science as fundamental as the "*Cogito, ergo sum*" of the philosophers, or as the faith of perfect trust and obedience of one of God's true worshipers.

That the preventability of a contagious disease is a fact, is as obvious as is that of its contagiousness. While the more contagious diseases are becoming less prevalent on account of the alarm which leads to more intelligent, stringent and cooperative measures of private and public quarantine, there is great danger, however, that the less communicable affections may be dealt with too lightly, because of the practical neglect of the common, every-day modes of transmission. It is on this account, probably, that such diseases as tuberculosis and typhoid fever are so prevalent, and that they swell the mortality-rate so much. Besides the two diseases mentioned, among others which may be placed in the category of communicability from the sick to the well through the medium of a general communion chalice are the following: Syphilis, diphtheria and croup, scarlatina, whooping-cough, follicular tonsillitis, perhaps measles and pneumonia. Dentists urge strongly the necessity of avoiding a common cup, and thereby possible infection from alveolar abscesses, diseased gums and the nasty malady known as "Rigg's disease," or *pyorrhea alveolaris*.

Who will say that perhaps many an innocent person has not acquired disease from a common communion chalice, or that the dangers residing in its use are sensational and imaginary, and not real, grave and well-nigh universal in Christian communities? Is it not clearly "illogical to pass a cup from mouth to mouth in a religious ceremony when the same practice

is justly condemned in our homes and in other public assemblages?"

From little less than axiomatic sanitary principles, then, the deduction is made that the substitution of individual, separate cups is urgently needed. These can be kept clean and free from the possible disease contamination by the innocent or careless. They are sanitary, safe, practicable, and moreover, as before intimated, they have the sanction of scriptural precedent, therefore not justly provocative of irreverence or lack of dignity, solemn impressiveness or deep devotion.

3. PRACTICAL AND SUGGESTIVE.—Lastly, would the adoption of an individual-cup system be practical as well as practicable? Recent experience answers this question in the affirmative. The adoption of anything which releases man from the dangers of disease is practicable; the progress of time, development of ingenuity, and an enterprising, persistent industriousness combine to look after its practical accomplishment.

If there were thirteen cups at the Lord's Supper, why should there not be two hundred, or five hundred, or one thousand for the needs of any congregation? The communion ordinance as administered in the Rochester churches by individual cups is entirely satisfactory, and the wonder is expressed that the change was not effected before. The celebration of the service is expedited, is conducted with a unity and harmony of action and impressiveness of spirit at once beautiful and elevating. I may state that between services the cups are sterilized in wire baskets and kept in tight closets, on rack or tray formed holders provided with lids to exclude any dust.

Philadelphia arrogates to herself the honor of being the medical center of the United States, and justly too, I think—with all deference to other cities. It behooves us, therefore, as the representative medical society of Philadelphia, to take a front place in furthering a sanitary movement which is bound to go forward with an increased impetus of beneficence by reason of its sanction and recommendation of this individual-chalice method of administering the communion ceremony in all the various churches now using the common chalices. Prompt action to that end will, I am sure, be termed by all but an unfit minority a worthy and lofty expression of science and sympathy conjoined.

Public attention and interest will also be aroused more energetically and widely; and after intelligent, unbiased and dispassionate consideration, individual chalices will be adopted throughout the country with proportionate readiness; and with their adoption into practice another modest quotum may be added to our hopes and efforts in attaining a high standard of public health and an ever-increasing longevity.

WHEREAS, The present use of common communion chalices or cups in churches exposes the communicants to the positive danger of acquiring certain contagious diseases, and is therefore a menace to the public health; be it

***Resolved,* That the Philadelphia County Medical Society hereby recommends the adoption of an individual-cup method or system of administering the communion wine in all churches, of whatever denomination or sect, where the common communion cup is now in use; and**

***Resolved,* That this society believes from undoubted evidence that an individual chalice or cup system would be a clean and safe and reliable means of preventing the liability to the spread of contagious disease from such a source as may reside in the ordinary chalice.**

The Absorption of Odors by Milk.

Parville relates some interesting facts upon this subject. If a can of milk is placed near an open vessel containing turpentine, the smell of turpentine is soon communicated to the milk. The same result occurs as regards tobacco, paraffin, asafetida, camphor, and many other strong-smelling substances. Milk should also be kept at a distance from every volatile substance, and milk which has stood in sick-chambers should never be drunk. The power of milk to disguise the taste of drugs—as potassium iodide, opium, salicylate, etc.—is well known.—*Gaillard's Med. Jour.*

Diet in Pneumonia.

The following rules (*N. E. Med. Gaz.*) may be laid down as to feeding pneumonia patients: 1. Give no solid food. 2. Let the food be simple and nutritious. 3. Give food at frequent intervals and in small quantities. 4. Let the patient have all the pure cold water and cooling drinks he may desire. 5. Solid food, given during convalescence, will often cause a relapse.

A CASE OF PANHYSTERECTOMY—RECOVERY.*

MARK A. RODGERS, M.D., PITTSBURG, PA.

Miss McC., aged 44, unmarried and a virgin. The patient presented a history of 18 years suffering from the various uterine syndroma. For six weeks prior to the time I first saw her she had been bedfast. She was rapidly declining in health and strength, and it was evident that unless she received immediate relief the termination would be early death from exhaustion.

The case was referred to me by Dr. George H. Miller, of MacDonald, Pa., and with him I first saw the case in consultation on September 1, 1894. I found the patient weak and emaciated, with a rapid, feeble pulse and, as stated above, in a very depraved state of general health. On bimanual examination I discovered a mural fibroid about the size of a cocoanut, involving the anterior uterine wall; and I could locate several smaller fibroids in various positions, intramural, mural and extramural. As the uterus was freely movable I advised immediate hysterectomy, and on September 3d the patient entered my private hospital. On September 5th I operated.

It had been my intention to remove the uterus if possible through the vagina, but after anesthetization when the patient was placed on the table, I discovered that the vagina was so exceedingly small that it would be impossible to deliver it by that route without such formidable incisions and the application of so much force that I concluded that it were foolish to attempt it. I reflected that to open the abdomen did not materially enhance the danger of the operation. Consequently, the patient was placed in the Trendelenberg posture, and the abdomen opened from the umbilicus to within an inch and a half of the pubis. The broad ligaments were then ligated with silk on either side down to the vagina, the bladder dissected from the uterus, clamps placed on the broad ligaments between the ligatures and the uterus, and the whole mass, including the cervix, ovaries and tubes, ablated. The vagina was next lightly packed with iodoform gauze. Then with a continuous catgut suture, the peritoneum was closed over the stumps of the broad ligaments, the posterior vaginal wall attached to the fundus of the bladder, and the abdomen closed.

The only interesting feature of the operation consisted in the manner in which the peritoneum was approximated. From the peritoneum on the posterior wall of the vagina to the peritoneum on the fundus of the bladder seems like a rather long distance to bring tissues for approximation, but it is done easily and without inconvenience or ill-effect. That portion of the bladder which had been attached to the uterus and which therefore presented a raw surface, together with the cut ends of the vagina, were inverted into the vaginal cavity and were maintained in that position by the catgut suture; so that when the operation was completed there was not a vestige of raw surface to be seen within the pelvis.

The patient made a rapid recovery, leaving the hospital for her home sixteen days after the operation.

The present tendency to operate through the vagina should not, I think, be carried to extremes. Personally, I prefer to open the abdomen in every case where it is necessary to incise the vaginal walls or do episiotomy or perineal section. For I believe there is less danger in an abdominal incision than in lacerations or extensive incisions in the vagina; and even those of the most indifferent surgical experience are aware of the tendency toward suppuration in tissues which have been subjected to traction.

Marcellment, so strenuously advocated by Péan, is only applicable in the rarest cases. As was pointed out by Martin at the recent congress in Rome, the possible dangers from ruptured pus collections, concealed hemorrhage and all the various complications which may arise from operating in an obscured field, more than counteract any advantage which might be derived from adhering to this method.

*Reported to the Pittsburg Academy of Medicine, September 24, 1894.

COMMUNICATIONS.

REPORT OF A GROUP OF CASES COVERING ALMOST THE ENTIRE FIELD OF ABDOMINAL SURGERY.*

M. PRICE, M.D., PHILADELPHIA.

CASE I.—Miss McC., a patient of Dr. Henry Lehman, suffering from a large multilocular tumor of the right side which had been noticed for several years, but gave no trouble. All at once it developed very rapidly, with symptoms of peritonitis and every indication of twisted pedicle. She was sent into the hospital, and the operation done at once. The tumor was a large, intensely black-looking mass adhering to the entire abdominal viscera, but the adhesions were easily broken, the tumor emptied and removed. The pedicle was found to be twisted four times. Rapid and uninterrupted recovery.

CASE II.—Mrs. M. J., a patient of Dr. George L. Romine, Lambertville, Pa., suffering from nodular fibroid of the uterus of five years' standing. Suffering from marked nervous excitement and depression alternately. Mental symptoms very marked. Operation—removal of both sides. Rapid recovery, with disappearance of all physical and nervous symptoms.

CASE III.—Miss L. P., a patient of Dr. Murphy. This patient had been suffering for a long time with pelvic disease; had been treated by a number of practitioners. None seemed to discover her trouble until Dr. Murphy carefully examined her case and suspected extra-uterine pregnancy. She asked me to see the case and confirm her diagnosis. I did so, and she was sent into the hospital for operation. The right side was an old and capsulated extra-uterine pregnancy and clot. The removal of the specimen, sac and blood; irrigation, glass drainage and rapid recovery.

CASE IV.—Miss D., eighteen years of age, a patient of Dr. Rush Leaman. This patient has been suffering from chronic gonorrhœa for a year. She was beautiful, but uncontrollable morally; had one miscarriage. Dr. Leaman asked me to see the case after the girl had been suffering a number of weeks with peritonitis. The doctor had been called a few days previous, and stated to me that she was suffering from gonorrhœal pelvic disease. My examination confirmed his opinion; also his recommendation that an operation was the only thing that would relieve her. She was taken to the hospital and both sides removed. When brought outside the abdomen, ugly irritated gonorrhœal pus poured from the fimbriated extremity of both tubes. The peritoneum was thoroughly irrigated; glass drainage twenty-four hours. When she left the hospital, four weeks afterward, she was in perfect health. After the operation she stated that at no time since had she suffered as she did weeks before the operation.

CASE V.—Mrs. S. S., suffering from trouble in the right side in the region of the appendix; unable to walk without supporting that side. When walking stooped toward the right side. Had been ailing five years, and for three months before the operation was a confirmed invalid. Appendicitis was suspected. There was great tenderness over the appendix, but no induration or tumor that could be discovered. She was opened in the median line, and the right tube and the vermiform appendix were found glued together, with an abscess of the tube and also one of the appendix. The vermiform appendix was carefully tied off, the diseased uterine appendage also removed, and the patient made a rapid recovery, with the entire removal of all symptoms.

CASE VI.—Mrs. R., thirty-four years of age, a patient of Dr. Clara Dercum. This is an exceedingly interesting case because there seemed to be some doubt as to the diagnosis of her trouble. Several good practitioners carefully examined her, and wavered between mutilocular cyst and pregnancy. Twice they went to the house to operate, but decided to wait, owing to the inability to say just what the trouble was. She fell into the hands of Dr. Der-

*Read before Philadelphia County Medical Society September 12, 1894.

cum, and she at once decided it was a mutilocular cyst. I was asked to see the patient to operate. I did so with the assistance of Dr. Dercum, Dr. Joseph Price, and Dr. George Hughes. I found the tumor to be a mutilocular cyst of the right side, weighing about thirty-five pounds. She made an uninterrupted recovery. Operation in the hospital.

CASE VII.—Mrs. L., twenty-six years of age; two children; suffering from double ovarian and tubal disease. This woman has been delivered by me twice, of fine boys. After her first confinement she was badly diseased by her husband after his regiment returned from camp. It was very hard to get her to continue the treatment sufficiently long for her to get perfectly well. The vaginal discharge continued until the second boy's birth. There were no symptoms of ovarian or tubal disease at that time, but I thought it doubtful that she would ever become pregnant after her first delivery. She conceived and went to term notwithstanding. I took all precautions during its delivery, and of the child's eyes immediately after the delivery. The baby had an angry purulent ophthalmia. The mother seemed to make a satisfactory recovery, but was again infected by her husband five weeks after the delivery, and continued to do badly, having repeated attacks of pelvic inflammation, which would get better but not well. After a year and a half of chronic invalidism she had well-marked disease on both sides. I had her taken to the hospital, and both sides removed for pus tubes and ovarian abscess on one side; glass drainage. She made a most satisfactory recovery.

CASE VIII.—Mrs. F. S., Trenton, N. J., a patient of Dr. Joseph Shaw, a colored woman, aged eighteen years, married, no children. Apparently in perfect health up to three months prior to the operation. She then began to rapidly enlarge and suffer from pressure symptoms. I carefully examined the patient with Dr. Shaw, and we decided that it was a fibroid undergoing malignant changes. She was at once sent to the hospital and the entire tumor and womb extirpated. She made a rapid and uninterrupted recovery.

CASE IX.—Mrs. C., Trenton, N. J., a patient of Dr. Joseph Shaw; large ovarian tumor, which had been mistaken for pregnancy by two good men, when Dr. Shaw was called in to treat the case. He decided it was ovarian disease, and asked me to see her in consultation. We had no trouble in coming to a conclusion that it was a multilocular tumor. The patient had been previously prepared for operation by Dr. Shaw, and with his assistance and that of Dr. Hughes I at once removed the tumor. She made a rapid and uninterrupted recovery.

CASE X.—William H. H. S., eleven years old, a patient of Dr. Hollingshead, Pemberton, N. J., was taken July 25th with pain in the right iliac fossa. He was freely purged, but without any benefit. On the first day of August there was free discharge of pus from the bowel; this relieved him temporarily. On August 3d he was seized with very severe pain on the right side. This continued to increase in severity, and I was telegraphed for. I found the boy suffering with severe pain on the right side, with an indurated mass extending from a little below the crest of the ilium to the region of the right kidney. An incision an inch and a half long was made over the most prominent point of the induration; a quantity of pus was discharged; pus also discharged from the bowel. The head of the colon was full of small openings. Thorough breaking up of adhesions in the pus cavity, which seemed to be sacculated; thorough irrigation and gauze and rubber drainage. This was removed on the second day, and light gauze packing used for several days longer, and the wound allowed to granulate from the bottom.

This is the fourth case of appendicitis operated on for Dr. Hollingshead within the last two years, two of the four having fecal fistula, which healed in from five to six days. All the cases were within a radius of a mile, and all recovered.

CASE XI.—Mrs. Rebecca V. S., thirty-two years of age, a patient of Dr. Hollingshead, Pemberton, N. J. Mrs. S. has been an invalid for two or three months, suffering from pain on the right side. She was completely incapacitated for work for about three weeks. She is the mother of the boy just reported, who was operated on for appendicitis. They were both in the same bed, the boy too ill to be removed, and he was operated on at once. The mother was removed to Dr. Joseph Price's private hospital, and was there operated on by me. She was suffering from a right

TABLE OF OPERATIONS FROM MAY, 1893, TO APRIL, 1894.

Date.	Name.	Age.	Children	Miscar'ge	Pathological condition.	Operation.	Result.
1893.							
May 17	Miss L., patient of Dr. Steer, Philadelphia.	30	..	..	Multinodular fibroids; bowel adhesions.	Supra vaginal extra-peritoneal hysterectomy; bowel stitching.	Recovery.
May 29	Mrs. B., patient of Dr. Landis, Philadelphia.	34	2	0	Large ovarian cyst of left side; pregnancy at 6th month; pelvic adhesions of cyst displacing the uterus to right loin; fibroid of right side of uterus.	Removal of cystoma and uterus.	Recovery.
June 1	Mrs. K., patient of Dr. Hughes, Philadelphia.	28	0	0	Large myofibroma; universal adhesions; small dermoid of right ovary.	Supra-vaginal extra-peritoneal hysterectomy; drainage.	Recovery.
July 1	Miss G.	35	..	..	Fibroid uterus about size of man's head.	Supra-vaginal extra-peritoneal hysterectomy.	Recovery.
July 26	Miss A., patient of Dr. Dunham, Trenton, N. J.	34	..	..	Multinodular fibroid; universal adhesions.	Supra-vaginal extra-peritoneal hysterectomy.	Recovery.
Aug. 21	Miss W., patient of Dr. E. Claussen, Lambertville, N. J.	42	..	..	Multinodular fibroid.	Supra-vaginal extra-peritoneal hysterectomy.	Recovery.
Aug. 26	Mrs. C., Philadelphia.	37	0	0	Fibromyoma of uterus; hæmatosalpinx and cyst, size of orange, of right ovary; universal adhesions; bowel omental and pelvic.	Supra-vaginal extra-peritoneal hysterectomy.	Recovery.
Sept. 7	Mrs. S., Philadelphia.	30	0	0	Multinodular fibroid; double hydrosalpinx; universal adhesions.	Supra-vaginal extra-peritoneal hysterectomy.	Recovery.
Sept. 17	Miss E.	35	..	..	Multinodular fibroid.	Supra-vaginal extra-peritoneal hysterectomy.	Recovery.
Oct. 24	Mrs. C., patient of Dr. Wells.	32	0	0	Multinodular fibroid.	Supra-vaginal extra-peritoneal hysterectomy.	Recovery.
Nov. 2	Mrs. C., patient of Dr. McLean, St. Louis.	50	3	1	Adenoma of cavity of uterus; sarcoma of right ovary about size of small adult head; universal adhesions of sarcomatous ovary.	Removal of tumor and complete extirpation of uterus.	Recovery.
Nov. 8	Mrs. J., Philadelphia.	36	0	0	Fibroid of uterus with huge pus tube on right side.	Supra-vaginal extra-peritoneal hysterectomy.	Recovery.
Nov. 8	Mrs. R., patient of Dr. Patrick, West Chester.	35	0	1	Multinodular fibroid.	Supra-vaginal extra-peritoneal hysterectomy.	Recovery.
Dec. 2	Mrs. F., patient of Dr. Bottom.	42	3	0	Huge hard tumor, undergoing cystiform degeneration, growing from posterior wall of uterus; right ureter fixed to tumor and carried high up, requiring dissection to free it.	Supra-vaginal extra-peritoneal hysterectomy, irrigation, and drainage.	Recovery.
Dec. 20	Mrs. D., patient of Dr. Macdonald, Princeton.	38	2	0	Multinodular fibroid of uterus; extensive adhesions.	Supra-vaginal extra-peritoneal hysterectomy.	Recovery.
1894.							
Jan. 19	Mrs. J., Philadelphia.	40	5	1	Multinodular fibroid; adhesions on both sides.	Supra-vaginal extra-peritoneal hysterectomy.	Recovery.
Jan. 28	Mrs. G., Philadelphia.	34	0	4	Multinodular fibroid; universal pelvic adhesions; double hydrosalpinx.	Supra-vaginal extra-peritoneal hysterectomy.	Recovery.
March 9	Miss W., patient of Dr. Campbell, Albany, Mo.	50	..	..	Multinodular fibroid of cervix; myoma of fundus; cystoma, large as a child's head, on left side.	Supra-vaginal extra-peritoneal hysterectomy.	Recovery.
March 14	Mrs. W., Philadelphia.	32	1	..	Multinodular fibroid; double hydrosalpinx, with universal adhesions.	Supra-vaginal extra-peritoneal hysterectomy, irrigation, and drainage.	Recovery.
March 16	Mrs. L., patient of Dr. Kennedy, Lansdowne.	36	1	2	Myoma of uterus; double hydrosalpinx.	Supra-vaginal extra-peritoneal hysterectomy.	Recovery.

TABLE OF OPERATIONS FROM MAY, 1893, TO APRIL, 1894.—*Continued.*

Date.	Name.	Age.	Children	Miscar'ge	Pathological condition.	Operation.	Result.
March 27	Mrs. W.,* patient of Dr. McLaine, Dr. Matlack, Philadelphia.	43	2	2	Multinodular fibroid umbilical hernia.	Complete extirpation.	Died March 27.
March 29	Mrs. P., patient of Dr. E. M. Harvey, Media, Pa.	38	0	2	Multinodular fibroid pelvis bound, surrounded by strong bands of adhesions.	Supra-vaginal extra-peritoneal hysterectomy.	Recovery.
April 8	Mrs. C., patient of Dr. J. J. Owen, Philadelphia.	50	7	0	Intra-uterine cancer.	Complete extirpation.	Recovery.
April 8	Miss C., Philadelphia.	42	.	..	Large multinodular fibroid, omental, large and small bowel adherent, general and strong.	Tumor deperitonized and nodules enucleated; complete extirpation, irrigation, and drainage.	Recovery.

* The patient was dying from obstruction of the bowel from pressure of the tumor on the transverse colon, which passed under the tumor; obstruction also in an incarcerated umbilical hernia. Defecation and the passage of flatus was impossible. She had stercoraceous vomiting for some forty-eight hours, and was evidently dying at the time of the operation, from which she never reacted. The operation was done to remove pressure and favor the escape of gas.

tubal abscess, which had ruptured, producing local peritonitis and infection of the pelvis, with abscess. Both sides had to be removed, and an abscess sac enucleated. Free irrigation, glass drainage. A great number of bowel adhesions in this case had to be broken, some stitching of the bowel necessary. The patient made an uninterrupted recovery.

CASE XII.—Dr. F. H., of Columbia, Pa., was operated on August 9th for an abscess on the right side, underneath the ribs. Its capsule was attached anteriorly to the abdominal wall and peritoneum; posterior between the liver and the peritoneum. An inflammatory diaphragm only. The abscess contained only probably half a pint of pus, and pushed against the diaphragm, giving him severe hiccough and spasmodic cough. It originated two years ago, from a fall on his door-step. His ribs were supposed to have been broken, and he was seen by Dr. J. W. White, of this city, and strapped, which gave great relief at the time. He was afterward seen by Dr. W. W. Keen, who advised him as to his case. I saw him about six weeks before the operation and advised him to have the trouble removed. He said he would as soon as he could, and on the 9th of August, in this city, I operated, irrigated and drained the pus cavity. He made a rapid recovery. The feature in this case to which I wish to call your attention, is the fact that it was two years in developing. The pus was perfectly sweet and bland. At the time of the operation he was broken down from pain and cough.

CASE XIII.—Mrs. R., a patient of Dr. Eckman, twenty-eight years of age; three children; confined to bed for three months with symptoms of tuberculosis—only a very slight cough. After a very careful examination of the sputa, no tubercle bacilli could be detected; a careful pelvic examination showed well-marked pelvic inflammatory disease, womb fixed, and exceedingly tender masses on either side. Her temperature was never normal; she had daily chills; abdomen tender, with a history of puerperal peritonitis thirteen months previous.

The absence of positive proof of general tuberculosis and the presence of sufficient pelvic trouble to account for her symptoms, warranted us in operating for her relief. There were no symptoms of dropsy.

The patient was operated on, and tuberculosis of the peritoneum, with all the viscera matted together and covered with tubercles, was found to be the cause.

All the adhesions were separated and the bowels, omentum and mesentery dusted with iodoform. The operation did not make any change in her so far as we could see, either for better or worse; she lingered until the eighth day, and then died. Post mortem was made by Dr. Eckman, and general tuberculosis was found to be the cause of death.

There is one question that suggests itself in this case: Why was there no dropsy? Did its absence indicate general infection? I have seen many cases as bad as this, accompanied with dropsy, that the opening and iodoform treatment seemed to cure. In my knowledge, none of them show any symptoms to-day of tuberculosis

WHEN IS THE ADMINISTRATION OF THE SULPHATE OF STRYCHNINE CONTRA-INDICATED DURING GESTATION?*

T. RIDGWAY BARKER, M.D., PHILADELPHIA.

In presenting this subject for consideration and discussion this evening, it is not my purpose to depreciate or undervalue the great benefit the sulphate of strychnine is capable of rendering in a majority of the cases of pregnancy.

The claims made for it by my friend, Dr. Duff, of Pittsburg, who has devoted himself with much enthusiasm to the study of this drug in its relation to obstetric practice, are not, I think, without justification; but, with the estimable conservatism of a seeker after scientific truth, he leaves the subject open for further study and research, awaiting until time and a wider experience shall prove its merits.

In a paper read before the South Side Medical Society of Pittsburg, and in one presented to the American Association of Obstetricians and Gynecologists, in 1893, he gives his clinical experience.

At the forty-fifth annual meeting of the American Medical Association, recently held at San Francisco, he again calls the attention of the profession to the value of strychnine, and points out that it renders abortions and premature deliveries less frequent by giving tone to the uterine muscles and nerves, as well as by its general tonic influence.

These statements are beyond question correct in the vast majority of instances; but he who would avoid error and misfortune must bear in mind that every rule has its exception, and that the latter, though often overlooked, is no whit less important than the former.

The sulphate of strychnine I have given to a score or more of women during gestation with the happiest results, and so general was the improvement in their condition that I began to think that there was no exception to this rule. I was not long left in doubt, for, as the following case reported will show, I met the exception in a most unexpected but none the less pronounced form.

Mrs. G., primipara, aged twenty-nine years; white; general health good. Last menstruated in October; previously regular. Suffered greatly from morning sickness and distressing nausea for nearly four months, which was uninfluenced by internal medication. There was besides these symptoms, costiveness and a more or less irritable bladder. The appetite was poor, and loss of flesh was quite marked as the pregnancy advanced.

In the early part of the sixth month she first complained of a sense of weight felt in the abdomen and pelvis; this was soon aggravated by soreness and pain which persisted throughout the day and night. The nervous depression in this case was all out of proportion to the severity of the symptoms, and seemed to trouble the patient more than almost anything else.

There was no kidney trouble of any kind nor evidence of swelling of limbs or face. The heart was normal save a slight anæmic murmur.

The blood was deficient in red blood cells and showed a condition typical of that found associated with pregnancy. The woman, when married, weighed some one hundred and thirty pounds, but now was much emaciated. The vagina and cervix were normal and the uterus in good position; there were no adhesions.

To judge from the size of the abdomen and the activity of the fœtus, development was progressing favorably. There existed, however, double ovarian tenderness, which denoted congestion of a pronounced type, and to this I ascribed in part the great mental depression, though, of course, much depended upon the anæmic blood supplied to the nerve centers.

Deeming this case one suitable for the administration of sulphate of strychnine from a careful analysis of the above objective and subjective symptoms, I determined to place the woman upon one-twentieth of a grain, twice a day, with the hope that it would stimulate a healthy nerve action and relieve, as has been claimed, the uterine irritability which threatened to result in an abortion.

I reasoned that the nervous disturbance was due to anæmia of the central nervous

*Read before Philadelphia County Medical Society September 12, 1894.

ganglia and involved the sympathetic system as well. That the uterus threatened to expel its contents because the nerves controlling its muscular coats were in a state of hyperæsthesia dependent upon insufficient nutrition. With this idea I placed my patient upon the drug, which experience had proved to be the best suited to overcome just such a condition as I found present.

With what result? Within thirty-six hours the uterus became more rebellious; its muscular contractions increased rather than lessened in violence, and recurred with greater frequency. The dull pain which had persisted for several days now became acute and intermittent, and radiated from the umbilicus to the loins.

An abortion was undoubtedly threatened, and might almost be considered inevitable. The sulphate of strychnine was promptly discontinued, as it had undoubtedly only made matters worse, causing a passive uterine contraction to become active, and thus augmenting the expulsive uterine forces.

A sedative mixture containing morphine, chloral, and bromide of soda in solution, was ordered to be taken every hour and the patient put to bed and directed to keep perfectly quiet. In a few hours the pains were allayed and the uterine contractions became feebler and recurred at longer intervals. These signs gave rise to a hope that the patient might yet escape an abortion.

Twenty-four hours elapsed with no return of the contractions. The prospect seemed to brighten, but only to give place within another twelve hours to a sudden and aggravated attack of pain, followed by strong uterine contractions, which, acting upon the cervix, soon overcame its constricting fibers, and an abortion was the result. In a few hours the whole uterine contents were expelled, much to the regret and disappointment of both physician and patient.

Thus ended one case of gestation in which strychnine may be said to have been the exciting cause of the abortion. Here we have what Duff probably refers to when he remarks in his paper, "I am not unmindful of the fact that I have seen apparent evil results from its administration in a few cases."

In looking over the history of the case reported, one cannot fail to be impressed with the fact that here was an instance where, had one known the exception to the rule, he would not have given strychnine, since clearly it was contra-indicated.

Instead of its acting as a sedative to the hyperæsthetic nerves through its tonic influence, it played the rôle of an excitant, and thus brought about the very result most to be deplored, namely, an abortion.

Some may take exception to the size of the dose (one-twentieth of a grain) twice a day; this I grant is not a small dose, but at the same time it is one I have frequently given with the best results, and I have found that a much smaller dose fails to be beneficial.

I do not, therefore, think that the amount administered made any material difference. That strychnine requires to be given during gestation with much more care than has heretofore been exercised, I think is very evident. Moreover, when there exists great mental depression associated with symptoms of distress and pain, referable to the pelvic region, with involvement of the uterus, I think the administration of strychnine is contra-indicated, for under such conditions it is more than likely it will act as an irritant and not as a sedative, and so will tend to produce an abortion, the very danger one is struggling to avoid.

Strychnine, then, it would appear, is indicated in cases of gestation which require a powerful nerve tonic, but contra-indicated when such cases are complicated by pronounced pelvic disorders of a nervous type.

Postal Transmission of Small-Pox.

Dr. Karkeek, the health officer of Torquay, England, records in his report for last year the occurrence of two cases of small-pox in which the infection was conveyed by correspondence from a nurse in a small-pox hospital. One of the cases occurred ten years back, and the other last April, the patient falling ill two days after leaving Torquay. His friends had suggested risk from reception of letters written by a hospital nurse engaged in attending small-pox cases, but he had pinned his faith on supposed disinfection of all letters. How far he was mistaken in his supposition was shown by the sequel.—*Med. Record.*

HYSTERIC APOPLEXY—THE DIFFICULTIES OF DIFFERENTIAL DIAGNOSIS BETWEEN THIS FORM AND CEREBRAL HEMIPLEGIA.*

DR. RENDU, PARIS, FRANCE.

The case which I am about to relate is particularly interesting on account of the apparently characteristic symptoms indicating a material lesion of the nervous system, yet this diagnosis, as you will soon perceive, is quite doubtful.

The patient is a man of sixty-one years and a road laborer, who entered the hospital last June for treatment of a recent affection of the nervous system. On the 3d of June, while at his work, he was suddenly seized with vertigo and fell upon his back, losing consciousness for a short time. He was carried home, where he returned to consciousness soon after. The next day his intellect was clear, while only headache and impossibility of working remained. That evening he expectorated a little blood, had a slight fever, general malaise, and, the day after, a pain in his left side.

His symptoms remained unchanged until the 8th of June, when he entered the hospital. He was noted as a well-developed, strong and vigorous individual, with his hair turning but slightly gray. He had no dyspnœa, yet he especially complained of functional thoracic symptoms. On the left side of his chest he suffered from a diffuse and vague pain, situated in the last four intercostal spaces. It was not spontaneous, but manifested itself on effort at deep inspiration; besides, percussion and palpation revealed a very characteristic and distinct zone of cutaneous hyperesthesia. These symptoms, with the history of hemoptysis, led to a physical examination of his chest, but the results were entirely negative. There was neither pleurisy nor pneumonia, and an intercostal neuralgia could not be diagnosticated as there were no painful and circumscribed points, but, on the contrary, a diffuse and badly outlined oversensitiveness of a large portion of the thorax. Examination of the circulatory apparatus only discovered a slight degree of atheroma, doubtless due to his age and which was characterized by a hardness of the pulse and an accentuation of the second heart sound.

Thus in spite of the history of hemoptysis and these functional disturbances, no sign of a pulmonary or cardiac lesion could be discovered. On the contrary, the nervous system seemed especially affected with intense headache, either in the frontal or occipital region. No painful neuralgic points; the predominant symptom being a persistent sensation of heaviness in the brain, dullness and dislike for work, without any somnolence. His vision was slightly disturbed, weakened, but there was neither strabismus nor inequality of the pupils, which reacted well to light. No roaring in the ears nor decrease in acuteness of hearing, but only a vague sensation of weight in the auditory canals. He especially complains of persistent though not very pronounced vertigo. As soon as he makes a movement, even if it be not sudden, he is seized for a few seconds with giddiness so severe as to force him to sit down.

Vertigo in patients of this age may be due to several causes. Frequently it depends upon arterial atheroma; again, it may be a consequence of disturbances of hearing or gastric disorders. The diagnosis is always difficult to make, as into every variety there enters a certain auditory element—roaring in the ears—as well as a gastric involvement—nausea and a tendency to vomiting—and according as one or the other of these groups of symptoms predominate in the symptom picture, the affection is traced either to the ear or the stomach.

Now, in our patient, examination of the digestive tract only reveals a few insignificant symptoms of dyspepsia, as a little weight in the stomach after eating, sour stomach and heartburn, which are easily explained by a defective hygeine, for indeed this individual is accustomed daily to drink three quarts of wine and one or two glasses of brandy, but he presents no sign of alcoholism. Finally, there is no apparent relation between this vertigo and the empty or full state of the stomach; the hour of eating and the appearance of the vertigo. It cannot be attributed to a certain degree, though even

* Translated for THE MEDICAL AND SURGICAL REPORTER by F. H. Pritchard, M.D.

slight, of interstitial nephritis, for this man of over sixty years only rises once or twice a night to urinate; there is neither pollanuria nor polyuria; his urine is rather dark than light colored; in quantity it is not above the average and it contains neither sugar nor albumen. In short, in this patient, if we except a little emphysema, we have found the other organs, heart, stomach and kidneys, to be normal.

Only the arteries appear to be hard and serpentine, whence it would appear rational to regard the vertigo as due to congestion and similar to that variety described by Grasset as occurring in arterio-sclerotic patients. Still another symptom, formication in the fingers and hand, especially that region supplied by the ulnar nerve, permits us to trace the vertigo to the brain. There is slight decrease in muscular power in the forearm. There is no disturbance of motility in walking, and the strength of the legs is normal. Otherwise there are no signs of hemiplegia, even the most indefinite, no facial assymetry nor difficulty in swallowing. Taking into consideration the initial attack, with loss of consciousness, we are forced to admit the existence of slight cerebral congestion, with, possibly, simultaneous disturbances of the cerebral circulation of limited extent which have given rise to slight paresis of the arm. This explanation would agree with the persistence of the cerebral symptoms, but would not explain the pleurodynia which marked the beginning of the symptoms. Indeed, in cerebral hemorrhage thoracic complications are rarely immediate; they are nearly always late-appearing symptoms and dependent upon pulmonary stasis.

Thinking these symptoms of cerebral origin, we applied leeches back of the ears and gave the iodide of potash, internally, in doses of seven grains a day, to which were added local applications of opodeldoc balsam to the chest and forearm. At the beginning, the results of this treatment seemed to confirm this view, for the cerebral symptom ameliorated greatly, the headache decreased, while only a sensation of heaviness of the head with slight somnolence remained. The pleurodynia disappeared completely. On the contrary, the formication in the fingers persisted with the same degree of intensity. A second examination, made the 15th of June, disclosed for the first time a complete anesthesia distributed along the ulnar border of the forearm. In the hand it involved the little finger and the internal side of the ring finger; above it did not extend beyond the elbow joint. Sensation to all impressions was abolished. There was analgesia, thermoanesthesia, absence of the muscular sense and of articular sensibility. He had lost all knowledge of the position of his third phalanges; he does not know whether they are extended, flexed, or crossed one upon another.

How are these phenomena to be explained? It cannot be that there is a localized paralysis of the ulnar nerve, though if it corresponded exactly to the region supplied by this nerve it might be possible to admit this conclusion. But the internal side of the forearm, according to Hirschfeld, is ramified as far as the wrist by the internal cutaneous brachial nerve. Again, the upper boundary of the anesthesia does not correspond to the anatomical distribution of the ulnar nerve.

On the other hand, is it not possible to regard the anesthesia as of cerebral origin dependent upon a lesion of the cortex or the nerve centres? This view would seem to me untenable. In affections of the nuclei, a motor hemiplegia without anesthesia is observed, except where the lesion is situated in the posterior portion of the internal capsule, when there is hemianesthesia. As to cortical lesions, they are recognized as motor disturbances involving the arm or leg without anesthesia.

Attempts have been made recently to locate the sensitive zones of the cortex. Ferrier would place them in the cortex of the hippocampus major. Horsley and Schaefer in the cortex of the convolution of the corpus callosum. In support of this latter view I will cite you an observation reported by Savill, * where a man of forty-seven years had suffered for three years from convulsions. After one of these he was seized with incomplete motor hemiplegia, accompanied by anesthesia limited to the arm; that of the leg was intact. At the necropsy a tumor was found at the posterior of the hemisphere and involving the gyrus fornicatus. It therefore would not be impossible to admit a cortical origin of this anesthesia; yet this interpretation ap-

* Th. Savill: "Another Case of Anesthesia Due to Lesion of the Gyrus Fornicatus," *Brain*, lix–lx, pp. 448–451.

pears to me improbable with the absence of associated motor hemiplegia and the extensive involvement of sensation, the muscular sense and articular sensibility being lost.

Now, you are well aware that anesthesia of such extent and affecting these senses, is not remarked during the course of cerebral affections, while Charcot claimed that it is nearly always a symptom of hysteria. In our patient, in spite of the general signs which marked the beginning of his disease, in spite of his age and his external appearance, which recalls to one nothing of a subject with nervousness, yet I think that hysteria will give us the best explanation of his symptoms. Indeed, we find in him three important signs of this disease: Anesthesia of the pharynx, abolition of sensation to contact and to pain upon the left half of the face, and, finally, narrowing of the visual field. If we had not discovered these three signs we should have hesitated somewhat. Recent works have confirmed the doctrine of Charcot that abolition of the muscular sense is exclusively of hysteric origin. According to him the motor zone is exclusively motor without any implication of sensation; hence, when it is diseased, no disturbances of sensation are to be noticed. This is not, however, the opinion of the English neurologists, and notably of Charles Bastian. This latter claims that the cortical centers are endowed with a certain general sensibility and, above all, with a special sensibility by means of which one is able to appreciate the degree of effort necessary to carry out a given movement. Hence, he thinks circumscribed lesions of the cortex are capable of giving rise to a paralysis of the muscular sense. Several clinical facts go to support this view. For example, Ranson records the case of a young man of nineteen years, who, after an injury, was affected with Jacksonian epilepsy and weakness of the left arm, without atrophy and accompanied by anesthesia, analgesia and absolute loss of the muscular sense. Trepanning was followed by a complete restoration of sensation and the muscular sense. Landon Carter Gray treated an individual affected with melanotic round celled sarcoma of the brain, with right-sided progressive hemiplegia, integrity of the general sensibility, but loss of the muscular sense on the whole right side of the body. The operation, to which the patient succumbed, revealed the tumor situated in the ascending parietal convolution. Thus a loss of the muscular sense is not always necessarily associated with hysteria; it only constitutes a favorable presumption. But all doubts disappear whenever the other stigmata may be elicited, as pharyngeal anesthesia and facial hemianesthesia.

In our patient, if we admit that this disease had intervened to produce these accidents, then we may easily explain the plaque of cutaneous hyperesthesia on the thorax, which was so painful during the first days of the disease, as well as the hemoptysis, for which the most careful auscultatory examination failed to reveal a cause. You will recollect that bloody sputa have been reported where apparently no cause could be discovered, as has been pointed out by Parrot, Ferrand and Carre. Finally, the sudden beginning and the apoplectiform appearance of the affection should not mislead us, for the works of Debove and Achard on hysteric apoplexy, have taught us with what frequency the neurosis may be accompanied by apoplectic attacks, with coma, loss of consciousness, hemiplegia, etc.

In the mean while you might ask if this were not a congestive seizure coming on in a hysteric, or even a cerebral congestion simulating the principal symptoms of hysteria. The first supposition would appear to me to be the more acceptable on account of the age of the patient, the marked degree of atheroma which he presents, and the decided improvement following the use of leeches. The exciting cause of this hystero-apoplectic attack would appear to have been a passive congestion. Finally, if there be any doubt with regard to the rôle of hysteria in our patient's case, the evolution and the history would decide the question. We have learned that this individual was well and healthy until the time of the attack; that he had gone through one or two similar crises, and that he was extremely emotional. You have observed how he lamented his condition, wept without ceasing, demanded to be discharged at once, etc.; this instability of character is characteristic of hysteria.

As to explaining why this seizure came on so suddenly, we are reduced to mere conjectures. Yet the prognosis is by no means as grave as with organic lesions, though from the condition of his arteries, his age

and habits, an actual apoplectic seizure is possible later.

Treatment should aim to relieve the congestion of the brain and act upon his neuropathic state. Douches should be avoided; in one his age they would cause too intense vascular modifications. Both the bromide and the iodide of potash, combined with light purgatives, are to be recommended. The sensatory disturbances might be treated by the continuous or faradic currents.

TRANSLATIONS.

THERAPEUTICAL SUGGESTIONS FROM FOREIGN JOURNALS.*

ANTISEPTIC TREATMENT OF DISEASES OF THE STOMACH AND INTESTINE.

Prof. Dujardin-Beaumetz (*Medicinische Neuigkeiten*, No. 34, 1894) states the chief indications for antisepsis of the stomach and intestines to be:

1. Infectious diseases especially localizing in the intestine—typhoid, dysentery, cholera, etc.

2. Infectious diseases in which the intestine is not particularly involved—erysipelas, small-pox, etc.

3. The majority of diseases of the stomach, liver and intestine within sufficient excretion of urine; also in certain heart affections.

4. Chronic and recurrent affections of the skin.

Therefore, in acute and chronic diseases the indications are very numerous. At any time when the toxines of the intestines are increased by infection or local disorder, and in cases when elimination appears impeded, antisepsis is of value.

The contra-indications concern less the method than the remedy. In kidney diseases certain drugs, as salol and naphthol, are badly tolerated on account of their irritating these organs; other remedies are contra-indicated in dyspepsia.

Antiseptic regimen: A very important factor is to prescribe a diet that will produce the least quantity of toxines in the intestines. The best foods are milk, fresh eggs, white meats, well-boiled vegetables and fruits. Soups, fish, game, preserves, cheese, etc., are to be avoided.

Constipation, one of the principal causes of auto-intoxication, must be combated by laxatives, purgatives and injections. Antiseptic irrigations act directly upon the large intestine, and for fear of poisoning, the non-poisonous antiseptics should be chosen; these are boric acid, a decoction of chamomile blossoms with boric acid, solutions of chloral, 1 to 500, beta naphthol in a very weak solution. Carbolic acid is to be entirely excluded. (A recent case of death was reported in Germany from injecting a solution of carbolic acid into the rectum.)

Antiseptics for internal use: Their number is very large. They are either soluble—resorcine, lactic acid, chloroform; or insoluble in powder form, as beta naphthol, salol or benzonaphthol.

Soluble antiseptics: Resorcine is of value chiefly in chronic enteritis and as follows:

℞ Pure resorcine..... 1 0-2 | 0 (grs. xv-xxx.)
Distilled water..... 200 | 0 (℥vjss.)
To be taken in twenty-four hours, in four doses.

Lactic acid is used in cholera and cholera infantum:

℞ Pure lactic acid ..... 2 | 0 (grs.xxx.)
Raspberry syrup. ..... 100 | 0 (℥iij ℥j.)
Water.....900 | 0 (℥xxvij.)
To be drunk in twenty-four hours in the diarrhœa of adults. In children prescribe:

℞ Pure lactic acid..... 2 | 0 (grs.xxx.)
Gum mixture.....100 | 0 (℥iij ℥j.)
A teaspoonful every three to four hours.

Chloroform water is given in fermentation in the stomach and intestines. The maximum dose is 100 grams of a saturated solution. This is diluted with one or two parts of water, according to the taste.

Antiseptics in powder form: Beta naphthol is administered in powders of 0.5 to 2.0 grams per diem, usually in combination with magnesia. The salicylate of bismuth may be given up to four or five grams a day. It is particularly valuable in diarrhœa. Betol or naphthol salicylate is prescribed in doses of one-half to two or four grams a day; the kidneys must be especially watched. Salol is especially

* In charge of the translator, F. H. Pritchard, A.M., M.D.

serviceable in biliary infectious processes: it is given in doses of one-half to a gram at a dose, and four grams a day. Benzonaphthol is best of all tolerated by the stomach and intestines; it is quite innocuous. The dose is from one-half to five grams a day; in children one to two grams, in doses of three grains (0.2), in a gum mixture.

NIGHT SWEATS OF CONSUMPTIVES.

Dr. v. Székely (*Muenchener Medicinische Wochenschrift*, No. 33, 1894) claims that the tincture of belladonna together with arsenious acid, is much more efficacious in the treatment of the night sweats of consumptives than the usually employed atropine and the other preparations of belladonna. His formula is as follows:

℞

Fowler's solution	āā 3	0	(gtts. xlv.)
Tr. belladonna			
Cherry laurel water	20	0	(℥v.)

In the evening a dose of fifteen to twenty drops may be taken, and later, during the night, another. Another remedy of which he speaks highly in this connection, and which also stimulates the appetite, is cotoin. He employs the following preparation:

℞

Cotoin	0	5	(grs. viijss.)
Water	120	0	(℥iv.)
Alcohol	10	0	(℥ijss.)
Syrup	20	0	(℥v.)

Two tablespoonfuls in the evening with an interval of two hours.

The same dose may be given in powder. Besides these remedies, the whole body should be washed with a solution of chloral (6.0–100.0) and alcohol in equal parts, or with a mixture of cayenne pepper and vinegar—one teaspoonful of the former to a teacupful of the latter. These applications are preferable to dusting powders. In some cases a little French brandy, at the most three teaspoonfuls in milk, is a good remedy for the profuse sweating. It must be used cautiously or it will increase the perspiration.

TREATMENT OF PIN-WORMS.

Dr. Nicholson (*Medicinische Neuigkeiten*, No. 34, 1894) in the treatment of pinworms in children recommends a combination of internal and local measures. A dose of santonine is given every second day for a week, while at the same time suppositories of quassia—0.6 to 0.8 to the suppository—are inserted each evening. The region of the anus is rubbed with a salve containing a little calomel and extract of quassia. From time to time a rectal injection of one ounce of olive oil containing one and a half drachms of menthol is given. The childrens' nails should be cut short so that self-infection from scratching is prevented.

STRYCHNINE AS A PROPHYLACTIC IN WEAK LABOR PAINS.

Dr. Duff (*Centralblatt f. Gynaekologie*, No. 28, 1894) employs strychnine as a prophylactic in general weakness of, and decreased muscular tonus of pregnant women, as well as in cases where there is a history of weak and irregular uterine contractions in previous labors, distinct weakness and flaccidity of the abdominal muscles, and post-partum hemorrhages from faulty contraction of the uterus. In all these cases he prescribes one milligram (1/60 gr.) of the drug three times a day, commencing six to eight weeks before the expected date of labor; eight days before the event, the dose may be increased from one-quarter to one-half. The results, he claims, are very satisfactory.

INTRAVENOUS INJECTIONS OF SUBLIMATE IN SEPTIC STATES.

Prof. Th. Kézmárszky (*Pester Med.-Chirurgische Presse*, No. 24, 1894) has employed intravenous injections of corrosive sublimate in two cases of puerperal sepsis. The first patient received, in ten injections, thirty-seven milligrams of the drug; the second, eight injections and thirty-one milligrams of the drug. In both cases there followed an astonishing amelioration of the general condition; the fever decreased and both recovered. In a case of very severe puerperal fever no result was obtained with seventeen injections, for after thirty to forty rigors it terminated fatally.

ANOTHER NEW TREATMENT OF HYDROCELE.

Dr. A. Herbing (*Centralblatt f. Chirurgie*, No. 26, 1894) describes a new method of treating hydrocele whose principle consists in the introduction of a foreign body. After disinfection of the skin, a doubled silk thread which has been sterilized previously, is introduced by means of a curved needle at the upper portion of the tumor and brought out at the lower

pole. The fluid contents are then drawn off by means of a coarse hypodermic needle or a fine trocar. Any remaining portion of the fluid is pressed out. The ends of the thread are then tied together, and the three points of puncture are touched with collodion. No dressing is necessary. The whole sac may be painted with collodion if desired. In the days immediately following, slight irritation ensues. After six to eight days the threads are removed and the punctures again covered with collodion. This method has the advantage of being simple and not requiring an anesthetic. In children it is a radical operation. In adults larger and more numerous threads must be introduced.

TREATMENT OF CRURAL ULCERS.

Dr. E. Vaugrente (*Wiener Medizinische Presse*, No. 35, 1894) describes in a recent Paris thesis a method of treating crural ulcers which is employed at Professor Tillaux's clinic, and which has the advantage of being easily applied. Treatment is both general and local. The former is directed against the cause of the usual ulcers, venous sclerosis from the diathesis, arthritism. Here the following solution is employed:

℞ Iodide potash..... 15 | o (ʒiv.)
Tr. iodine..... | (gtts. xxx.)
Distilled water.....300 | o (ʒix ʒiij.)

A tablespoonful after each meal.

This solution, if tolerated, must not only be taken until the ulcer has healed, but long after. Local treatment consists in touching the ulcer with a 5–10 per cent. solution of the chloride of zinc, for three to four days in succession. Then a compressive and occlusive bandage of strips of mercurial plaster is applied and allowed to remain on for three or four days, when it is renewed. This causes the formation of healthy granulations and soon leads to cicatrization of the ulcer. With this a cure must not be thought to have been obtained, for the cicatrix must be consolidated, which is best done by local application of a saturated solution of picric acid, applied with a brush or on compresses and covered with an impervious material. This is also assisted by exposing the scar to the rays of the sun or the heat of a stove.

ANTISEPTIC TREATMENT OF DYSPEPSIA.

Prof. Dujardin-Beaumetz (*Medicinische Neuigkeiten*, No. 34, 1894) in the antiseptic treatment of dyspepsia recommends the three following formulæ; the former two in dyspepsia with diarrhœa, the latter in the same affection when associated with constipation:

℞ Beta naphthol.....
Salicylate bismuth.....
Magnesia or powdered rhubarb. } āā 10 | o (ʒijss.)

Sufficient for thirty powders. Two to four a day.

℞ Salol.....
Salicylate bismuth.....
Bicarbonate soda..... } āā 10 | o (ʒijss.)

Sufficient for thirty powders. Two to four a day.

℞ Salol.....
Benzonaphthol.....
Magnesia..... } āā 10 | o (ʒijss.)

Sufficient for thirty powders. Two to four a day.

ICHTHYOL IN ACUTE PHARYNGITIS.

Dr. Sonnenberg (*La Semaine Médicale*, No. 52, 1894) states that he has found the most efficacious treatment of acute pharyngitis to consist in having the patient gargle, every ten to fifteen minutes, with a 2–3 per cent. solution of ichthyol. In forty cases where he employed this treatment the inflammatory phenomena disappeared in twelve to twenty-four hours.

COPPER AS A HEMATIC REMEDY.

Prof. Cervello (*La Semaine Médicale*, No. 52, 1894), of Palermo, Italy, claims that copper possesses hæmatogenic properties similar to those of iron. He administered the sulphate, in doses of six milligrams per diem, mixed with sugar of milk, to patients with malarial cachexia. He also recommends it in anemia and especially in chloro-anemia.

TO REMOVE RUST FROM SURGICAL INSTRUMENTS.

Dr. Saenger (*Hospitals-Tidende*, No. 36, 1894) praises the following measure to remove rust from instruments. The instrument is placed into a saturated solution of the chloride of tin over night, and then taken out and washed off in hot water with a soda soap.

CORRESPONDENCE.

CHRISTIAN SCIENCE.

EDITOR MEDICAL AND SURGICAL REPORTER: In the very brilliant paper published in your journal of September 22d by Dr. S. S. Towler, regarding a little criticism I made of Dr. Longsdorf's paper on "Christian Science," I very unintentionally "touched the doctor on the raw." The doctor is right. We will forget that we are dealing with "timid, modest maidens," and perhaps say things that we had better left unsaid.

I am heartily sorry, Dr. Towler, that I was deprived of the pleasure of hearing the remarks you so thoughtfully favored the society with after the reading of Dr. L.'s paper.

You have been jumping at conclusions. I am not an upholder of "Christian science" in its literal sense, as a glance at my article in THE MEDICAL AND SURGICAL REPORTER of September 29th will testify (this article was read May 9th, before Dr. L.'s), in which I suggest that the patient's mind needs a little more attention than is usually paid to that important part of man. But I will protest against legislating away the right to cure a class of neurotic unfortunates who are being slowly cut and dosed to death. Who is at fault? Either patients do not have faith in their medical advisers, or else the latter have failed in their diagnosis.

Thank you, doctor, for the report of your case. If I had talked a week I could not have given a better example of "faith cure." By the way, doctor, that tallow-candle story has a similarity to a story told of Dr. S. Weir Mitchell.

Yours truly,

J. NEWTON HUNSBERGER.

SKIPPACK, PA.

STERILE PUS IN HEPATIC ABSCESS.

M. Rendu related the case of a woman, aged 51 years, who entered his service, February 10th, for an abdominal affection, the diagnosis of which was obscure. A month previously the patient, until then healthy, had experienced pain in the right iliac region, accompanied by vomiting, diarrhœa, and fever. When she entered hospital the vomiting and diarrhœa had ceased, but the fever persisted, with chills and considerable enlargement of the abdomen; the liver was enlarged and the entire perihepatic region pa nful. The lungs were also the seat of iconsiderable congestion, and the general condition of the patient resembled that of a person suffering from typhoid fever. M. Rendu diagnosed the case as one of infectious enteritis with secondary congestion of the liver and lungs. At the end of several days there was much improvement in the abdominal symptoms, but the state of the lung became aggravated and signs of broncho-pneumonia soon appeared. The patient, however, lived for some time, and death followed from cachexia due to inanition.

At the autopsy a portion of the intestines was found agglutinated, and the vermiform appendix bathed in a small quantity of thick, greenish pus. The cæcum was the seat of numerous partly-cicatrized ulcers, while the liver was filled with small cavities varying in size from that of a hazel-nut to that of a walnut, and containing pus. This pus was found, on examination, to contain chains of cocci exactly resembling the streptococcus pyogenes. Other specimens of the pus were subjected to culture, some in agar, some in bouillon. All remained sterile and could not be cultivated. Thus, a pus morphologically containing infectious microbes showed itself to be practically sterile, proving that we are not in a position to state positively that the pus of an old abscess, which does not contain micro-organisms at the moment of examination, did not primarily contain them. It is difficult to say why the microbes of hepatic suppuration may thus lose their virulence and become sterile; but it may be reasonably asked whether the liver, which in a healthy state serves as a filter for toxins, does not exert a salutary action also upon the pyæmic infarcts developing within its parenchyma.—*Semaine Médicale—Univ. Med. Jour.*

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SATURDAY, OCTOBER 13, 1894.

EDITORIAL.

OLIVER WENDELL HOLMES.

Shortly after noon, Sunday, October 7th, without indication of pain or semblance of struggle, Dr. Oliver Wendell Holmes died, practically of old age, at his home in Boston and surrounded by the members of his family. His death was as his life—peaceful and beautiful. For several years Dr. Holmes is reported to have been afflicted with asthma, and his return to the city from his country home ten days previous to his death caused a particularly severe attack of this malady. He had recovered, however, from the acute attack, but it left him very much broken. Never robust, he had lived to the great age he did through having taken the best care of himself at all times; but the power of recuperation was gone and his vitality was exhausted.

Oliver Wendell Holmes was born in Cambridge, Mass., on August 29, 1809. His father was the Rev. Abiel Holmes, a, clergyman of Cambridge and a historian who is said to have made the first attempt at writing a history of this country in his "American Annals." His great-grandfather was John Holmes, one of the old Puritan stock who settled in Woodstock, Conn., about 1686. Oliver Wendell Holmes inherited his father's literary instinct and very early began to write verse. At college he became the editor of the college magazine, and at the age of twenty-one, the year after his graduation, the agitation over the announcement of the intended destruction of the old war frigate Constitution began, and he wrote the well-known poem "Old Ironsides," which was published in the Boston *Advertiser*. He became famous at once. He had struck a popular note, and the tide of public opinion set strongly against the destruction of the vessel.

As a boy at Phillips' Academy, Holmes translated the "Æneid." After graduation from college he turned his attention first to law, but never practiced, and later took up the study of medicine. He spent three years in hospital study, and practiced in Edinburgh and Paris, and in 1836 he received his medical degree. In that year he published his first volume of poems. He always continued to make medicine his profession, but early made literature his diversion, and as a poet and author

became known to the people. He accepted the Professorship of Anatomy and Physiology at Dartmouth College in 1839, and later practiced medicine in Boston, where he married Amelia Lee Jackson, daughter of Judge Charles Jackson, of the Massachusetts Supreme Court, by whom he had two sons and a daughter. In 1847 Dr. Holmes was made Professor of Anatomy at Harvard, a chair in which he continued until 1882, when he resigned, and was made Professor emeritus. President Eliot paid this tribute to his skill: "There are 3,000 men throughout New England who will remember Dr. Holmes through their lives, and transmit to their children the memory of him as a teacher of exact science."

Dr. Holmes wrote forty-two works on medical subjects, and lived to see many of his early ideas of medicine, which at first met with condemnation, accepted by leading physicians of the world. Speaking of this recently, Dr. Holmes recalled the storm of indignation which was raised by his famous epigram that if all the medicine in the world were thrown into the sea it would be all the better for mankind —and all the worse for the fishes. And then he laughed quietly as he remarked that now most of the profession practically agreed with him.

In 1857, when the *Atlantic Monthly* was started, Lowell asked Dr. Holmes to contribute to it. So he began "The Autocrat at the Breakfast Table" essays, which obtained immediate popularity, and the success of the magazine was assured. "The Professor at the Breakfast Table" (1860) and "The Poet at the Breakfast Table" (1873) followed, and then after long years came a number of papers in the same vein in the new *Scribner's Magazine*. "Over the Teacups," which appeared a few years ago, was made the occasion of the announcement by Dr. Holmes that it would probably be the last of the series.

Dr. Holmes was a sociologist, though he was not often recognized as such. In the only two novels which he wrote, "Elsie Venner" (1861) and "The Guardian Angel" (1868), his skill in dealing with social problems was shown. "Elsie Venner" was a curious study in heredity.

Mature in mind in early years, Dr. Holmes in age was young in thoughts. More than thirty years ago at a class gathering he said:

"Has there any old fellow got mixed with the boys?
If there has, take him out without making a noise.
Hang the almanac's cheat and the catalogue's spite!
Old time is a liar! We're twenty to-night."

And more than forty years ago he said to young men:

"Be firm—one constant element in luck
Is genuine, solid, old Teutonic pluck.
Leave what you've done for what you have to do;
Don't be 'consistent,' but simply true."

When lectures were popular, forty years ago, Dr. Holmes was in demand on the platform and was ever full of philosophy and fun. Lowell said this of him:

"There is Holmes, who is matchless among you for wit,
A Leyden jar always full charged, from which flit the electrical tingles of hit for hit."

Whittier paid tribute to Dr. Holmes in more sober verse, and but a little while ago Dr. Holmes referred publicly to "my friends Whittier and Bryant," whom he had outlived.

Dr. Holmes was a successful practitioner and a popular teacher of medicine, and the medical profession has always been proud of the fact. But it is not as a physician that Dr. Holmes attained the preëminence to entitle him to be called great. If it were possible to separate the literary man from the physician, his work in his scientific profession would not rank him among great physicians. It is a benefit to civilization in general, if not to the world of science, that Dr. Holmes achieved his greatness in the world of letters, as it is the loss of the author, not the physician, that has produced such profound sorrow the world over.

Commenting upon the subject, a writer in the *Tribune* says: "The death of Oliver Wendell Holmes, a natural event at his great age, but not the less a sorrowful bereavement, is the extinction of one of the most remarkable men of this century. Holmes may have been, in the characteristics of humor and fastidious taste, a disciple of the wits of the age of Queen Anne, but in the essential fiber of his intellect—its calm courage, its broad vision, its ample equipment, its eager, joyous, sanguine vitality—he was emphatically a man of the present day. He sympathized to the fullest extent with the march of thought, and in every direction of advance he stood in the front line. As a writer he ranged over many fields, and in all of them he manifested not only copious and various mental resources, but two of the greatest qualities that exist to dignify the human

mind and to help the human race—lucid perception and dauntless cheer. He knew the world as it is; he saw everything; and he was neither dismayed nor saddened. At all times and under all circumstances he spoke for the nobility that is in man and the spiritual grandeur to which man is naturally destined; and his voice always rang out, clear and bravely, the inspiring watchwords of labor and hope. Whether in essay, novel, or poem, or treatise, or history, or speech, his indomitable spirit was always present; and thus, while dispensing the force and beauty of thought, the pleasantness of mirth, and the gentle light of humor, he imparted the benefit that is needed most of all, the blessing of strength. The reader of Holmes receives a continual impulse toward the steadfast, cheerful performance of duty; a continual incentive to unquestioning faith in the final prevalence of right; and therefore the world is better and happier because he has lived in it.

"There will, doubtless, be discussion, as time flows on, with reference to the rank of Holmes as a man of letters, but there will be no discussion as to the influence that he exercised; and perhaps no question is of much practical importance that can be raised concerning any writer who has helped his generation to bear its burdens and to do its work. The literature that is permanently valuable to the world is that which transcends personal expression and enters into the general life. Holmes, by his 'Autocrat' alone, reached thousands of minds—filling them with liberal ideas and kindly views; stimulating their finer propensities, and generally prompting them to look at all things in a tolerant mood, to be merciful as well as just, and to lighten the toils and troubles of this transitory life with mirth and laughter. In this respect he did not leave his place to be determined by controversy, but took it, and held it, for himself. He was, most of all, a humorist; and furthermore—which is exceptional and extraordinary—he was a humorist in a new vein; for he did not stop at character and manners, but ranged through the whole wide realm of philosophy, and, with the deepest appreciation as well as the liveliest fancy and the most genial pleasantry, played about the gravest subjects that can occupy our thoughts. Born and reared in the intellectual period of Emerson, he felt, with that great spirit, that 'the solar system is not sensitive to criticism,' and, with a spontaneous drift toward goodness and beauty, he neither darkened his vision nor restrained his speculative faculties, nor put the least curb upon his exuberant humor. His 'Autocrat,' therefore, is one of the most natural books written—a book that teems with stimulative suggestions, and one that has helped, to a high degree, to emancipate the age from many fetters of bigotry, conventionality and folly.

"Holmes himself valued his humorous writings less than he valued his poetry. Indeed, it was as a poet that he chiefly desired recognition and remembrance; for he was well aware that all his powers derived their vitality, lucidity and harmony from the poetic principle that was at the basis of his mind. To how great an extent poetic emotion was controlled in him by his very vigilant faculties of sense and humor, and by the circumstances of his conventional environment, it would not, perhaps, be easy to determine. That it was so controlled, and that he often felt it to be so, is manifest. No writer has suggested so sadly, so pathetically, the strains, surpassing all earthly music, that die away unheard in the viewless temple of the soul. The crowning excellence of his verse is felicity. He had inspiration—as when he wrote 'The Chambered Nautilus,' 'The Voiceless,' 'The Iron Gate,' 'Under the Violets,' 'Martha,' 'Nearing the Snow-Line,' and that exquisite tribute to Moore, which is certainly one of the best poems of occasion that ever were written. But his inspiration does not seem to have been constitutional, and perhaps he was more a poet by art than by nature. He possessed, however, a prodigious moral fervor, combined with the torrid glow of a brilliant intellect and with great sensibility, and he was a supreme master of style. No man has ever spoken better the word that it was in him to speak.

"With the extinction of Holmes, almost the last of the literary lights of New England has disappeared. It was a noble group. Dana, Percival, Emerson, Hawthorne, Longfellow, Whittier, Willis, Curtis and Holmes—all sons of a Puritan commonwealth, all children of the Muses, all famous, and all at rest. What a wealth of genius, of aspiration, of beautiful character, and of noble living those names de-

note! and what a wonderful variety of faculties and achievements! In all the luminous circle there was no heart more true and tender than the heart that is now stilled forever; no spirit so bright as the spirit that now has passed into that awful darkness and silence where only the eyes of love and hope can follow."

ABSTRACTS.

THE IMPORTANCE OF EARLY DIAGNOSIS IN LATERAL CURVATURE OF THE SPINE.

Dr. Benjamin Lee, in a paper with this title, said: "Every orthopedist is aware of the difficulty of successfully treating a confirmed case of lateral curvature. The mechanical problems involved are of so complex a character and the tissues affected are of so unyielding a nature as to make complete restoration of symmetry in the majority of instances an impossibility.

"The large majority of cases of this diseases occur, as is well known, in growing girls. Apart from all considerations of physical suffering and ruined health, the woman who is fated to go through life with a humped shoulder and a twisted torse is doomed to constant humiliation, mortification, and disappointment. It is worth while, then, to attempt to prevent at least a portion of this torment of body and anguish of heart and mind. I know of but one way in which this can be accomplished, and that is by taking cases in time, before the skeleton has become so set in its abnormal position that the application of even powerful mechanical apparatus is able to effect but little change. In order to take them in hand thus early we must, first, be able to recognize them, and, secondly, put ourselves in a position to recognize them.

"Absolutely no intelligent conclusion can be arrived at by cursory and imperfect methods of investigation. In order to determine the presence of lateral deviation, we shall look not at the spine itself, but at the contours of the two sides. We must see the entire back from the head to the cleft of the nates.

"In order to detect incipient rotation we must carefully examine the comparative position of the transverse processes on either side. This is done by placing the forefinger of each hand, held as nearly flat as possible, on each side of the spine at the level of the vertebra prominens, and slowly and with equal pressure passing them down, side by side, over the lateral processes, as far as the sacrum.

"If, at any point, one finger begins to approach the observer while the other recedes from him, there is rotation at that point, and if such alteration in the position of the fingers takes place in reverse directions at two different points, then a compensatory curve has begun to form."—*College and Clinical Record.*

Tampons in Menorrhagia.

Dr. W. T. Lusk strongly urges (*Amer. Jour. Med. Sc.*) the employment of the tampon in cases of uterine hæmorrhage where the curette shows no endometrium disease. He has found it especially serviceable in young patients. The tampon should be used according to the Dr. Sims method. It should be made of cotton soaked in carbolized water, and compressed into flattened disks. By means of the Sims speculum, these should be applied firmly to the vaginal vault, and should be continued to the urethro-vaginal septum. The tampon should be removed at the end of twenty-four hours, the vagina irrigated, and a fresh tampon introduced. Not more than two or three applications are usually needed. Under this treatment, normal muscular tone is restored, and the tampon can be dispensed with.

Otaheite Orange.—This plant is cultivated exclusively for ornamental purposes on account of its propensity to bloom continuously. Its handsome little fruit is not particularly desirable for eating.

SOCIETY REPORTS.

PHILADELPHIA COUNTY MEDICAL SOCIETY.

Meeting of September 12, 1894.

Dr. M. Price reported

A GROUP OF CASES COVERING ALMOST THE ENTIRE FIELD OF ABDOMINAL SURGERY.

(See page 444.)

DISCUSSION.

DR. J. M. BARTON: Dr. Price reported one case where he removed the uterus because it produced obstruction of the bowels, the patient being in collapse at the time of the operation. Under these circumstances the usual surgical procedure would be to make a temporary artificial anus by a small abdominal incision, to bring out a single loop of the distended bowel, the distention showing it to be above the obstruction, and to open it at once. This is the method of Mr. Treves, and is one I have used with some success on several occasions. If the patient rallies, extirpation of the uterus or such other radical surgical procedure as may be required may then be resorted to, with the patient in a condition to stand the operation.

There is one point I would like to call attention to in the appendicitis operation reported. I understood the doctor to say that he does not close any portion of the abdominal incision. If not closed it is very liable to be followed by a hernia. In my earlier operations I had several cases of hernia, but in my later cases I have been fortunate enough to avoid this by using the gauze not as a drain, but only to isolate the rubber drain and by at once closing nearly all the wound.

If the pus is deep I make the opening through the abdominal walls not less then four inches in length, and after opening the abdominal cavity, and before opening the abscess or attempting to remove the appendix, I p event infection of the general peritonea' cavity by surrounding the place where I propose opening the abscess with gauze, packing it under the edges of the incision so as to keep the movable intestines away from the wound and the danger of infection from the pus. The abscess is then opened and two rubber drains introduced to the bottom of it, and the abdominal wound closed by the interrupted suture, allowing only the ends of the rubber drains to protrude, the gauze is left inside, with only a corner showing, by which to seize and remove it on the third or fourth day.

The two stitches next the rubber drains are tied in a bow-knot so that they may be readily retied, if they have to be loosened to remove the gauze. All the cases in which I have used this method have recovered without any hernia whatever.

Of course, if the abscess is in contact with the anterior abdominal wall and the general cavity shut off by adhesions, no gauze packing in necessary, and the short incision such as Dr. Price mentioned is quite ample.

DR. ERNEST LAPLACE: I share the opinion of Dr. Barton that in chronic cases of appendicitis, where pus is isolated from the general peritoneal cavity, the more we treat the condition as one of abscess the more successful we will be. A small incision is not as good surgery as laying the abscess freely open so as to see what we are doing, not tampering, however, with the posterior wall of the cavity. Then the walls should be cleaned and irrigated and the cavity packed gently with iodoform gauze. This gauze should be removed and replaced the following day. The more thoroughly we are able to apply the theory of asepsis the better will the case behave.

I take it that we cannot be too cautious in treating cases of chronic appendicitis. We must look at it as nothing but an abscess, and never look for the appendix unless it is to be easily found. If it is not removed it will do no harm and be imbedded with the rest of the cicatricial tissue during the healing process.

DR. MARIE B. WERNER: There is one part of the paper which interested me very much, and that is the question of the mental state in pelvic disease. About

two years ago I made some investigations, as far as I was permitted, at the Norristown Insane Hospital. I examined thirty cases and found 50 per cent. suffering from pelvic disease of some sort. Some, no doubt, would have been benefited by local treatment, others by operation. There were two on which I operated. One was a case of double hydrosalpinx. The patient had been insane since 1888. The operation was done in July, 1892. The patient is now, so far as I know, perfectly sane. This patient was seen by Dr. Thomas G. Morton, after dismissal, who verified my present statement. She left the hospital about eight weeks after operation. In the second case there was a cystomatous degeneration of one ovary and tubercular disease of both tubes and ovaries. The patient had had several attacks of insanity, and had been in Kirkbride's three times. Each attack had been preceded by an attack of pelvic inflammation. In this case the ovaries and tubes were removed, and the patient made a rapid and thorough recovery. I saw her afterward in her own home, and she was well not only physically but mentally.

I am sorry that I cannot speak of more than two cases, but these two cases show that there is a wide field for work of this kind. I do not wish to be understood as pleading for the knife entirely; I plead for thorough investigation and good treatment in these cases. In my own practice I have met with several cases which led me to think that much could be done in that direction. One which I distinctly remember occurred in my early practice. The patient was a young woman who felt that she must leave her baby or else she would kill it. She suffered from a laceration of the cervix and a complete laceration of the perineum. I repaired the lacerations, and she got well, but how long the cure lasted I cannot say, because she drifted out of my sight. It certainly lasted a few years.

Dr. J. M. Baldy: I did not care about discussing the paper; but since such emphasis has been laid on the nervous phenomena in connection with fibroid tumor, I should not like the statements to go out from the society apparently sanctioned by my silence. In a very large number of fibroid tumors (hundreds) I have not seen one in which there was any insane symptoms. Thinking over my cases, I should say that they are decidedly more free from nervous phenomena than any other class of gynecological cases; certainly more than the pelvic inflammatory cases. As to insanity being due to gynecological troubles, I have a number of times been called to insane hospitals to see patients whose friends were possessed with the idea that their insanity was due to pelvic disease, and in not a single instance have I found the slightest disease to which the insanity could be attributed. I do not believe that the subject has anywhere near the importance that has recently been attempted to be given to it.

Dr. W. Easterly Ashton: In a large experience with fibroid tumor I have certainly seen no symptoms that would in any way point to a disordered state of the mind. It is true that some of these women are nervous, but any one would be nervous suffering from constant pressure. Outside of the nervousness caused by the physical inconvenience of the tumor, women have no mental symptoms.

It seems to me that the statement of Dr. Price in reference to fibroid tumors causing insanity is in line with another idea that has been advanced in regard to these growths, namely, that all fibroid tumors should be removed by operation. I am far from convinced that every fibroid uterus should be removed. The idea of insanity associated with fibroid tumors seems to be an additional plea for this form of surgery. As long as a fibroid tumor of the uterus is small and uncomplicated by pelvic trouble, I see no reason why the woman should be subjected to abdominal section. The tumor should be carefully watched, and if it grows or shows signs of inflammatory changes, then it must be removed.

Before I sit down I should like to ask Dr. Price for an explanation. Last spring at one of the meetings of the Obstetrical Society I made some remarks on the exploratory incision, and made the statement that in a large percentage of obscure cases I would give very little for the positive diagnosis of any surgeon. Growing out of this statement Dr. Price stated that in no instance had he ever opened the abdomen unless he could put his finger on the disease. I would, therefore, ask what led him to operate on the case of suspected appendicitis, if the diagnosis was uncertain?

DR. G. BETTON MASSEY: I can add my testimony in regard to the absence of any special mental manifestations in association with fibroid tumors. Out of a large number of cases I can recall none that presented such manifestations or more than the usual eccentricities of chronic illness. I wish to say, in regard to pelvic operations for mental disease, that there certainly is danger of overdoing them, and I speak from a medical experience of three years in a hospital for the insane. I must, however, temper my remarks by saying that as yet the gynecologic treatment of the insane is an untried field in most of these institutions, and we should welcome any evidence of an increased scientific spirit among them.

Dr. Werner mentions a case where repair of the cervix and perineum was done in a case of puerperal insanity, and the patient got well. My view of puerperal insanity is that it is not due to an irritation such as that, but is an infectious disease. The disease is frequently curable of itself in six weeks. Possibly the criticism might apply to other cases also that they were not of the ordinary chronic type of insanity.

DR. JOHN C. DA COSTA: I agree with what has been said by Dr. Baldy and Dr. Ashton in regard to insanity not accompanying fibroid tumor. I do not think that Dr. Price meant to say that all these cases of fibroid tumors were accompanied by insane symptoms. I rather think that he intended to say that they were sometimes accompanied with nervous symptoms of a profound character. Where you have a woman with a tumor in the abdomen which she knows has to be taken out, she naturally will be nervous until she has made up her mind positively that it has to be removed. My experience has been that so far as mental derangement is concerned—not nervousness—cases of fibroid tumor have been free from it.

In regard to operation in these cases, I agree with Dr. Ashton as to the propriety of letting small fibroids alone. When they grow rapidly or threaten malignancy it is time enough to take them out. I have now under observation cases of fibroid where I consider that operation would be so dangerous as to threaten life, and I am sure that by proper management they will tide over the menopause and get well if let alone.

DR. WERNER: I wish to state that the case in which I repaired the perineum and cervix was one that did not occur in my own practice as an obstetric case. She fell into my hands a year after the child was born, so that it could not properly be called an *acute* puerperal case.

DR. PRICE: Replying to Dr. Ashton, I would say that if he looks over the case of appendicitis he will find that I put my finger on what I was going to remove. I knew that there was a diseased ovary and a diseased appendix—cut for it, and removed it. I think that for eight years I have never done an exploratory operation. I have never opened the abdomen to make my diagnosis, yet Dr. Ashton is in a measure correct. In abdominal surgery exactness is impossible, but a man who is not able to say when he has a big ovarian tumor or a big fibroid is certainly deficient in diagnostic ability, and should not operate until he is sure he has something to remove.

In regard to fibroid tumors of the character that Dr. Massey mentions, I never see them. The patients never come to me until they are distressed by the condition and are suffering. In the thirteen cases reported there was not one in which the tumor was not larger than my head. When a tumor is of the size of a cherry-stone to that of a lima bean, such as Dr. Massey tells us about, I think that the knife should not be used. I agree that they are electric cases if you can find them, but no one but an electrician can detect them. I think that if the cases of extensive fibroid disease are carefully examined it will be found that a number—I do not say all or nearly all—of them have mental symptoms that are marked and border closely on the line of insanity. I do say that of the pelvic cases with suppurative disease, any number of them are to-day in our insane asylums, and the list of insane could be materially diminished if these cases were properly treated. I agree with Dr. Werner when she says that she does not advocate the knife in all of these cases of insanity; but if you can put your finger on the thorn that has driven that woman with pain and suffering to the mad-house, remove it. They are there by the hundreds, and operators throughout the country are saving hundreds from going there. If any one of you had a mass of pus in your abdomen with ad-

herent omentum and bowel racking your constitution, your chances of going to the insane asylum would be ten times greater than they are now. I do not say that this condition of itself produces insanity, but it greatly predisposes to it. We can prove it by a number of cases that have come into the house insane and have gone out sane.

With regard to appendicitis, I think that Dr. Barton and Dr. Laplace misunderstood me. I agree with those gentlemen except as regards the incision. I have had twenty-three cases with two deaths. One was a case of Dr. Collins', which could have been saved if they had listened to Dr. Collins. The second case died of sepsis present at the time of operation. In two cases the appendix was removed. These were median operations. When the appendix is to be removed I believe that it should be a median operation. Where you remove the appendix the symptoms of abscess are not so marked, but you have symptoms of obstruction of the bowel. Here you have to make a median incision in order to detach the adhesions. If you find that the abscess is mapped off from the peritoneal cavity you can make a drainage incision above the crest of the ilium. In the cases that fall into my hands there is generally a well-marked abscess, and drainage is the only indication, and no effort is made to find the appendix.

I think that the practice of packing the whole abscess with gauze is unsafe. I think that if these cases are opened, irrigated, and a gauze and rubber drain put in, the gauze being replaced every twelve or twenty-four hours, they will all get well. I do not care if the whole head of the colon is gone, they will get well without a fecal fistula. I have seen large quantities of feces pour out for eight or ten days and the opening finally close. If you make the incision too long you may go beyond the abscess cavity and get into the abdomen. A two-finger opening will enable you to do all that is necessary.

FISH-BONES IN THE THROAT.

Dr. Adolph Rupp (New York *Medical Journal*) says:

The reasons for the impaction of foreign bodies, such as fish-bones, needles, pins, and the like, are not to be sought for in the pharynx primarily.

Under normal conditions, the tongue, fauces, and pharynx, in so far as deglutition is concerned, are perfect organs, looked at as a mechanico-physiological apparatus.

The primary and chief cause of fish-bones, needles, etc., being caught or entangled in the throat, must be looked for in the bolus itself—the position of the fish-bone or needle in the bolus, whether lying deep or on the surface, the angle the fish-bone or pin occupies to the long axis of the bolus, and, besides, the varying and various forces that act on the bolus as it is forced toward the stomach.

Possibly the bolus leaves the tongue and descends the pharynx with a twist or screw-like movement.

The Falk-Kronecker-Meltzer conception of deglutition, based on experimental results, may be utilized in explaining how fish-bones become impacted in the throat—and these experimental results do not exclude the element of gyration as one of the forces that impel the onward-shooting bolus.

The epiglottis is an indifferent organ in so far as deglutition is concerned—also for foreign bodies.—*American Lancet.*

The Contagion of Mumps.

Le Courrier Médicale gives some interesting information concerning mumps. The incubation period varies from eight to thirty days, but in the majority of cases the duration is from eighteen to twenty-two days. It is especially contagious during this period, but is also contagious for some time after cure. The exact length of time has not yet been determined. The parotid and testicular fluids and also the blood appear to contain a certain pathogenic organism, but as yet this point is unsettled. Hitherto the results of inoculation with this special microbe have been negative. Frequently the disease begins with tumefaction of the submaxillary glands and a severe angina. Sometimes in metastatic orchitis the swelling begins with an epididymitis.

CURRENT LITERATURE REVIEWED.

IN CHARGE OF ELLISTON J. MORRIS, M.D., AND SAMUEL M. WILSON, M.D.

THE AMERICAN JOURNAL OF OBSTETRICS

for September. Dr. John Young Brown, First Assistant Physician Central Kentucky Asylum for the Insane, discusses

Pelvic Disease in Its Relationship to Insanity in Women.

The author holds that simple neurosis is not an indication for operation. "In this day of conservatism," he says, "with the knowledge we have of the symptoms and pathology of pelvic disease, the indications for an operation in a given case are to be based on the local diseased condition of the organs and the symptoms resulting therefrom, and not on any supposed reflex symptoms. I hold that no surgeon has a right to remove the uterine appendages from a female lunatic unless there is present a pathological condition which would warrant an operation in mental health." From his own observations in the asylum with which he is connected, he is convinced that examination will show that fully twenty-five per cent. of the female population of our State institutions suffer from some form of pelvic disease.

The report includes the report of four operations performed by the author, with three recoveries to health and one failure, a case of nymphomania.

Dr. Charles N. Smith, Gynecologist to St. Vincent Hospital, Toledo, Ohio, reports a "Total Extirpation of the Uterus for Myofibroma Complicated by Pregnancy." The operation performed, that of total extirpation, is not recommended as a routine practice, although it seemed best in this instance. The patient made a good recovery.

Dr. Helena Goodwin, of Philadelphia, reports a case of "Pregnancy Following Ventral Fixation of the Uterus." The patient had had three children and ventral fixation had been performed for retroversion after the birth of the third child. She had had attacks of "inflammation" after each confinement and again after the operation. At the end of the fourth gestation the uterus was firmly attached to the anterior abdominal wall, rendering the application of an abdominal binder necessary. The labor was a breech. Following this the patient had an attack of inflammation as before, and five months after delivery the reporter performed a section for the removal of the right appendages, with ultimate recovery of the patient.

Dr. Frederick A. McGrew, Instructor in Physiology Rush Medical College, reports "Three Cases of Nephritis in Pregnancy," with two recoveries and one maternal death.

Dr. Rufus B. Hall, of Cincinnati, presents the "Clinical Report of Four Cases of Appendicitis: Operation and Recovery."

Dr. Richard Douglas, of Nashville, describes "A New Vaginal Speculum" devised by him.

Dr. Howard A. Kelly, Professor of Gynecology and Obstetrics in the Johns Hopkins University, contributes a paper on "Electric Illumination of the Field in Abdominal Surgery," describing the various forms of lamps used by him in his work.

The remaining paper, "The Etiology, Pathology, and Treatment of Intestinal Fistula and Artificial Anus," by Nicholas Senn, M.D., Professor of Practice of Surgery and Clinical Surgery in Rush Medical College, etc., has already appeared in THE MEDICAL AND SURGICAL REPORTER of September 22d, page 390.

THE AMERICAN JOURNAL OF THE MEDICAL SCIENCES

for October. Dr. Landon Carter Gray, of New York, contributes a lengthy paper on

Persistent Albuminuria and Glycosuria, with Frequent Hyaline Casts, in Functional Nervous Diseases.

The author states that he has been accustomed for many years to have urinary examinations made in cases of neurasthenia for fear of overlooking some lurking renal trouble. In this way there have been examined 31 cases of neurasthenia, 1 case of subacute mania, 2 of Raynaud's disease, 2 of hypochondria, 1 of *folie de doute*, or mysophobia, 5 of melancholia, 4 of vertigo, 1 of lumbago, 1 of diabetes mellitus, 1 of spinal syphilis, and 3 of hemiplegia. In all of these cases tests have been made for albumin, sugar, urea, the phosphates, uric acid, calcium oxalate, casts, and indican; and in many cases the urine has been tested for nucleo-albumin from the bile, for serum-globin, fibrinogen, urobilin, and bile. In most of these cases, albumin, sugar, excess of phosphates, oxalate calcium, uric acid, and indican have been found. The author states that he has found Millard's test to be a much more reliable one than that by heat and nitric acid, inasmuch as he has frequently failed to find slight amounts of albumin by the latter, when they have been found by the former; while on the other hand he has never failed to find albumin with heat and nitric acid, when it has been demonstrated by Millard's test. For sugar he believes the indigo carmine test to be the most delicate and reliable. For reasons given at length in the paper the author believes that the following conclusions are justifiable:

1. Many functional nervous diseases, especially neurasthenia, can constantly or well-nigh constantly be accompanied by albuminuria, glycosuria, excess of uric acid and oxalate of lime, and occasionally by excess of urea, indican, and hyaline casts.

2. It is probable that these urinary products are results rather than causes of disease.

3. These conditions very probably represent what has been called lithæmia.

4. It is probable that many, if not most, of these cases are not cases of early nephritis.

5. It is possible that there are different albumins in the urine, and that upon the determination of these will rest the future diagnosis of nephritis from other diseases.

In the treatment he has not found any advantage from any one system of diet. The light cases without mental or nervous symptoms or digestive symptoms are best treated by nitro-muriatic acid; or in some instances by nitro-muriatic acid before meals and from 2 to 5 grains of salicylate of soda after meals. Laxatives should be used with care—usually the author has found Rochelle salt to be sufficient, in doses of a drachm in a tumbler of water before breakfast. The cases in which there is intestinal disturbance he divides into two classes: Those in which there is intestinal disturbance alone and those in which the intestinal disturbance is accompanied by mental or nervous symptoms. For the intestinal disturbance he has long given up the use of pepsin, as he believes it only relieves temporarily, and its continued use will often aggravate. Sometimes pancreatin will do good, but he states that his patients have derived more good from the subgallate of bismuth, salol, calomel, subnitrate of bismuth, codeia, laudanum, and salines. Of these he believes that subgallate of bismuth and salol are the most effective, in doses respectively of 5 and 2 grains three times a day. It is usually of advantage to preface their use by a few doses of calomel, say 2 grains at bedtime for one or two nights or 1-10th of a grain given every hour for four or five hours. Where the nervous symptoms are present he adopts a modification of Dr. Weir Mitchell's rest treatment. He has abandoned massage, as he thinks that in many cases of neurasthenia it actually prolongs the weakened condition, while he has seen it aggravate cases of melancholia.

Appended to the paper is the description of the chemical tests employed in the urinary examination.

Dr. Willy Meyer, Professor of Surgery at the New York Post-Graduate Medical School and Hospital, etc., discusses

Recent Methods of Gastrostomy for Stricture of the Œsophagus.

The author sums up his paper as follows:

1. There are now three useful and reliable methods of gastrostomy at the surgeon's disposal. Of these, one (Witzel's) prevents leakage with absolute certainty. The two others, if properly carried out, promise the same good result. Thus the patient who has been submitted to this operation will not starve from regurgitation of the food alongside the tube.

2. In view of this fact, gastrostomy should be resorted to "early" in cases that will sooner or later need this operation.

3. In cases of burn of the œsophagus, primary gastrostomy and timely dilatation of the contracting scar will most probably prevent conditions which at present generally confront the surgeon in this class of cases, and are sometimes incurable. Witzel's method of gastrostomy deserves preference. The oblique canal produced by it will close spontaneously when the tube has been removed. Thus a secondary operation will not be needed.

4. In cases of cancer of the œsophagus a gastric fistula should be established as soon as the scales show a steady decrease of the patient's weight.

5. Further experience is needed with reference to Ssabanejew-Frank's method before an attempt is made at giving each of the three operations its proper place in the treatment of cancerous stenosis. If future observations be favorable, Ssabanejew-Frank's operation seems to be destined to become the standard one for malignant stricture of the œsophagus. If unfavorable, Witzel's method should be done wherever it can be carried out.

6. Von Hacker's method should then be reserved for far-gone cases, and should, if the patient be very weak, be done under cocaine-anæsthesia, best at two sittings. If properly performed the outlook for making the fistula close tightly around the tube is good.

The remaining paper in this issue, "Bacteriological Investigations of Diphtheria in the United States," is contributed by Dr. William H. Welch, Professor of Pathology in the Johns Hopkins University. The paper is the report in behalf of the American Committee on Diphtheria to the Eighth International Congress of Hygiene and Demography, held in Budapest, September 1 to 9, 1894.

Insomnia of Old Age.

Dr. J. W. Dale, in the *University Medical Magazine*, recommends very highly the use of morphia with a small amount of Dover's powder for the relief of the sleeplessness which is frequently one of the most serious complaints of the aged. The ordinary hypnotics, such as the bromides, chloral, and the numerous coal-tar derivatives, answer well for temporary purposes, but not where the demand is long continued. Dr. Dale gives at first from the 24th to the 12th of a grain of morphine, with 2 or 3 grains of the Dover's powder. This amount will need to be increased slightly as the patient becomes accustomed to it, but the doctor has found that even after a number of years, patients do not require an increase beyond a ¼ of a grain of morphine and 10 grains of the Dover's powder. Its use, he has found, is best limited to persons over 70 years of age, at which time of life its regular use is tolerated with impunity, and he has never found it to do any injury. The object in using the Dover's powder is to increase the bulk of the medicine, so that the patient will not be apt to increase the dose. Any particular increase would result in nausea from the presence of the ipecac. In addition to this, the small amount of ipecac present tends to maintain healthy action of the skin, and stimulate the stomach and the functional activity of the liver, as well as to diminish the tendency to constipation.—*Massachusetts Med. Journal.*

PERISCOPE.

IN CHARGE OF WM. E. PARKE, A.M., M.D.

MEDICINE.

Microbic Origin of Purulent Surgical Infection.

MM. S. Arboing and E. Chantre, after reciting their views at length, sum them up as follows: The essential agents of purulent surgical infection are the ordinary microbes of suppuration. Should other microbes be present in the lesion with any frequency they are to be regarded in the light of complications, and not as necessary factors in the development of the purulent infection. A purulent infection can only result when the streptococcus (the authors confine themselves to that form) is endowed with the same virulence as it possesses in the acute and severe forms of puerperal septicæmia, and not with that which it exhibits in single phlegmon or erysipelas.

Though etiological relations between purulent infection, puerperal septicæmia and erysipelas may be suspected, yet it cannot be proved where and how the change in the pathogenic properties in the streptococcus, productive of different chemical conditions, is effected.—*Journal of the Royal Microscopical Society.*

The Treatment of Pruritus Vulvæ.

1. If diabetic, try specific treatment and diet, with warm lotions locally.

2. If connected with a chronic eczema of the genital organs, a gonorrhœal vaginitis, a chronic vaginitis with leucorrhœal discharge or vaginismus (with hysterical symptoms), suppress all exciting diets. If there is abundant discharge, inject night and morning 3-4 pints warm (45° C.) permanganate of potash solution (1 : 1000). Use three times a day the following lotion:

℞ Water.....	450	00	grams or parts
Alcohol.....	50	00	"
Mercuric chloride.....	1	00	"
Indigo carmine.....	0	05	"

If burning or itching come on (especially during second half of night) wash with water as hot as possible. Abstain from all pomades, ointments, etc., which by their fermentation, etc., increase the irritation.—*Medical Chronicle.*

Generalized Pneumococcus Infection.

M. Netter, at a meeting of the Society of the Hospitals, said that he had lately seen a generalized infection, including endocarditis, produced by pneumococcus. The patient, who was a youth of 19 years, had a very high fever, with pulmonary infarcts, and a cardiac murmur. The manifestations disappeared with the exception of the murmur, indicating that a permanent valvular lesion remained. Making a bacteriological examination of the blood and sputum, M. Netter found only the pneumococcus. In an abscess of the leg, developing upon the site of an erectile tumor, he had also discovered the same organism. In this case the microbe had not penetrated into the blood through the respiratory passages, but by way of the abscess just mentioned, and which was the first of all developments. This observation shows, furthermore, what had been already stated by M. Jaccoud and the speaker, that pneumococcus endocarditis is comparatively benign.—*La Tribune Medicale.*

Extraordinary Temperature.

M. Ch. Richet, at a recent meeting of the Biological Society, called attention to a remarkable case of hyperpyrexia observed in Sicily. The patient was a woman suffering from intermittent fever. While the morning temperature was no higher than 39° C. (102° F.), in the evening it ascended to 45° C. (113° F.), as observed by Professor Caparelli, of Catania. Upon two different occasions it even rose to 46° C. (114.8° F.). The utmost care was taken to avoid deception. Moreover, under the influence of quinine the temperature fell to 36° C. (96.8° F.). When the drug was suspended the mercury rose to 46° C. After a fresh exacerbation of longer continuance the temperature fell to normal and the patient recovered.—*La Medecine Moderne.*

Heart Disease.

Pawinski (*Therapeutische Monatscheft*) compares caffein natrio-salicylate with strophanthus and digitalis as follows:

In valvular diseases of the heart, with disturbance of compensation, digitalis and strophanthus are superior to caffein, but the latter can often do good service when the former are contraindicated.

In respect to regulating the heart rhythm, caffein is also inferior to the others; but in respect to excitation of diuresis, it is much superior. The best field for the administration of caffein is in diseases of the heart muscle, either functional or degenerative, and especially in the early stages of the disease. But in the later stages, when the heart, in consequence of progressive degeneration of the muscle fibers, is not able to perform its duty, and there are œdema, dyspnœa, and dilatation, then we must resort to digitalis.

Caffein is also indicated in acute insufficiency in patients whose circulatory system is otherwise healthy, such as after severe mental strain, moral commotion, and especially during fevers In many cases also caffein produces a pleasant narcotic effect.—*Canadian Practitioner.*

Treatment of Sunstroke.

The conditions of sunstroke are an immoderate heating of the blood, and, consequently, of the whole body. The heat stimulates the heart ganglia, and, through these, the heart muscle, which is already overworked, and paralysis of the heart, from exhaustion, follows. The immoderate heat also irritates the various nerve centers of the brain, and thus produces general convulsions, etc.

Koerfer (*Therapeutische Monatscheft*) prescribes prolonged chloroform narcosis to reduce the irritability of the heart ganglia and nerve centers, and then the ordinary therapeutic measures; *e. g.*, cool baths, large amount of fluids (per anum, if necessary), ether and camphor injections, etc Hirschfeld recommends, instead of the cold bath, a prolonged warm bath, the temperature of which is very slowly lowered, and venesection, if there be œdema of lungs or brain.—*Canadian Practitioner.*

Heart Disease and Menstruation.

Dr. Gow recently read a paper (*Lancet*) before the Obstetrical Society of London, with a record of 50 cases. In 28 the flow was unaltered; in 17 the flow was absent or scantier than before; in 5 the flow was either more profuse or recurred more frequently than before; in no case was there good evidence that heart disease gave rise to severe menorrhagia. It would seem that either amenorrhœa or scanty menstruation was a far more common accompaniment of heart disease than menorrhagia. A further analysis of these cases seemed to point to the fact that heart disease led to relative sterility, and also that it greatly increased the tendency to premature expulsion of the ovum. In conclusion, it was pointed out that a large number of women suffering from valvular disease of the heart pass safely through the period of pregnancy and labor. The cases were futher analyzed as follows:

1. Mitral stenosis (22 cases): In 9 cases menstruation was regular and the amount lost unaltered, in 5 cases menstruation was regular but more scanty, in 4 cases there was amenorrhœa, and in 4 cases menstruation was either more frequent or more profuse.

2. Mitral incompetence (15 cases): In 10 cases menstruation was unaltered, in 4 cases menstruation was more scanty, and in 1 case there was amenorrhœa.

3. Mitral stenosis and incompetence (7 cases): In 4 cases menstruation was unaltered, in 1 case menstruation was more scanty, in 1 case there was amenorrhœa, and in 1 case there was slightly increased menstrual loss.

4. Aortic incompetence and obstruction (2 cases): In both cases menstruation was unaltered.

5. Aortic and mitral incompetence (3 cases): In all cases menstruation was unaltered.

6. Aortic incompetence and obstruction and mitral incompetence (1 case): Menstrual loss was more scanty than before.—*The Kansas Medical Journal.*

Compound Tincture of Coal-Tar.

In the *American Journal of the Medical Sciences* Duhring writes a paper on compound tincture of coal-tar.

Summing up the result of his investigations, we may conclude—

1. That the best tincture of coal-tar is made with the aid of tincture of quillaia.

2. That the strength of the tincture of quillaia should be 1 to 4, with 95 per cent. alcohol.

3. That the coal-tar (1 part) should be digested with the tincture of quillaia (6 parts), with frequent agitation, for not less than eight days, and preferably for a longer period, and finally filtered.

4. The resultant product is a brown-black, clear tincture, which, upon the addition of water, forms a cleanly yellowish emulsion, the color and certain other characters varying with the kind of coal-tar employed.

5. The tincture is stimulating and is prescribed usually largely diluted, with from 10 to 60 parts of water, as a wash, and is useful where tar is indicated, as in certain forms of eczema, psoriasis, pruritus, and other inflammatory diseases of the skin. It is often more useful when employed weak than strong.

6. This preparation, which may be designated as "compound tincture of coal-tar," takes the place of several similarly composed proprietary preparations, known as "liquor carbonis detergens" and "coal-tar saponine."—*Therapeutic Gazette.*

Nephritis in its Surgical Aspects.

Dr. E. L. Keyes (*American Journal of the Medical Sciences*) says:

Healthy urine is sterile.

Purulent urine is always microbic.

Microbic infection takes place from within the body by a number of methods in the course of disease; it is often brought about by instrumental maneuvers on the part of the surgeon

A healthy organism and vigorous bladder may cope successfully with microbic invasion, and rid itself spontaneously, or with a little acid, of all damage arising therefrom—showing little or no inflammatory response.

A suitable condition of the patient's soil is essential to the propagation and perpetuation of inflammatory phenomena upon the urinary tract—after microbic invasion.

This condition, intensified by traumatism and physical weakness, notably of degenerative variety, is most intense where there is vesical distention with atomy, and when the ureters are dilated and the kidneys involved in the changes incident to tension below—namely, atrophy and sclerosis above, with or without surface catarrh.

Under these circumstances surgical pyelonephritis is most likely to declare itself as a result of microbic infection from below (occasionally from above)—in the course of suppurative disease or after operative interference.

Asepsis, antisepsis, and sterilization of urine are ends to be aimed at in genito-urinary surgery—but, like all other greatest goods, not yet attained in perfection. Much, however,

can be done by local means in a prophylactic and curative way, little by internal medication, and possibly as much or more than by any other means by flushing the urinary passages with natural mineral waters.—*American Lancet.*

The Forms of Diabetes.

Dr. George Harley gives the following classification of diabetes:

1. Hepatic diabetes—including the gouty variety.
2. Cerebral diabetes—including all cases of saccharine urine arising from nerve derangements.
3. Pancreatic diabetes—the most deadly form of the disease.
4. Hereditary diabetes—a form by no means uncommon, and one, too, where both brothers and sisters may labor under the disease without either their maternal or paternal parent having been affected by diabetes, though more distant members of the family may have suffered from it.
5. Food diabetes—including all forms of saccharine urine arising from the ingestion of unwholesome substance.

In the matter of treatment, besides diet and opium or codeine, Dr. Harley recommends croton chloral, strychnine, phosphoric acid for thirst, and an absolute prohibition of alcohol.—*Med. Record.*

The Administration of Sodium Salicylate in Rheumatism.

In Ziemssen's clinic the salicylate of soda is given per rectum in cases where it is not well borne by the stomach, or from any cause administration per os is contraindicated. When necessary, the rectum is first cleared out, and then, by means of a 7-inch sound, a solution of 6 to 8 grams natrio-salicylate in 100 c.cm. of water, to which 1½ grams tr. opii is added, is injected. The results are excellent.

Ruel recommends, in such cases, the local application of acid salicyl., and claims as good results as when administered internally. The following salve may be used twice a day, and covered over with oiled silk or any impermeable stuff: Acid salicyl., 10 to 30 grams; alcohol abs., 100; ol. Riemi, 200; chloroform, 10 to 15. Bourget also found the external application of salicylic acid to the affected joint very effective, and recommends it very highly. He applies an ointment similar to the above, and combines with it the internal administration of 1 to 2 grams of salacetol daily.

Salacetol is a new salicylic preparation, which is highly recommended as an intestinal antiseptic.—*Therapeutische Monatscheft.*

Concurrent Infections in Pulmonary Tuberculosis.

Prudden (N. Y. *Med. Jour.*), in a series of experimental studies on rabbits, found that animals subjected to concurrent infections with the tubercle bacillus and the streptococcus pyogenes showed a most remarkable formation of lung cavities. He thinks the view that tuberculosis of the lungs is liable to assume the character of a mixed infection by the entrance of other germs than the tubercle bacillus very important.

This conception of pulmonary tuberculosis serves to explain in the clearest way the varying vicissitudes of this disease, and the unfavorable course which it is liable to pursue when its victims are exposed to the widespread chances of infection with pyogenic germs in cities, and especially in crowded and improperly cleaned hospital wards. On the other hand, some, at least, of the beneficial effects of life in the open air of salubrious regions are explained; and the rationale of some of the favorable effects of so-called antiseptic treatment becomes clearer from this new point of view. But, beyond all, this conception of phthisis emphasizes the importance of definite and intelligent measures for warding off the complicating lesions by scrupulous attention to hygiene and sanitation, and especially the avoidance, in ways suggested by our modern notions of cleanliness, of common sources of aerial infection.

Sero-Therapy in Tetanus.

Remesoff and Fedoroff recently reported in the *Centralblatt fur Bakteriologie*, a case of tetanus treated successfully by means of the serum of an immunized animal. The serum used was estimated to have the curative value of 1-300,000. The symptoms of the disease were already marked when the first injection of 50 c.cm. was made. The serum was obtained from a dog which had been rendered immune to tetanus. The next day after the first injection the patient was already improved, and the improvement continued until the fourteenth day, when he was discharged well.

The authors summarize the facts which have been developed by experience with this method, up to the present time, as follows:

1. The duration of this disorder is decidedly diminished by sero-therapy.
2. The temperature is reduced.
3. Sleep is restored.
4. The attacks of spasm grow less severe and more infrequent.
5. The frequency of the pulse is diminished.
6. Great improvement in the general condition is induced.

The Treatment of Erysipelas.

The subject of the treatment of erysipelas naturally falls into the (1) dietetic, (2) constitutional and (3) local, says Dr. J. M. Anders in the *Therapeutic Gazette.* The following summary shows in a few words the proper treatment of this disease:

1. Proper attention to the diet is of paramount importance.

2. Stimulants are rarely necessary if the dietetic requirements are fully satisfied, but may be freely exhibited when indicated.

3. Of drugs, iron has been widely tested and found to be of great value, though it matters little which salt or preparation is employed.

4. Quinine, when administered with iron, reduces the temperature, supporting at the same time the vital functions.

5. The use of antiseptics *per os* is to be recommended.

6. Pilocarpus is in a small proportion of cases powerful to abort the affection. To reduce temperature merely, pilocarpus should be employed in intense pyrexia, particularly where the favorable morning remisssions do not occur.

7. The question of the local treatment of erysipelas has not as yet been set at rest, but agents intended to exclude the air and such as possess a germicidal power, especially corrosive sublimate, are highly useful.

8. That the erysipelococcus of Fehleisen, which is found chiefly in the more superficial channels of the corium, may be attacked directly by the corrosive-sublimate solution when the latter is used after scarification, is quite probable.

9. In erysipelas migrans, the germicide should be injected beneath the skin, just beyond the edge of the part inflamed.

Boracic Acid in Constipation.

Excellent results may be obtained in many cases of constipation by the application of powdered boracic acid to the rectal mucous membrane The writer's mode of application is as follows:

The ordinary rectal speculum having been introduced, half a drachm of powdered boracic acid, either pure or mixed with an equal quantity of starch, is introduced by means of a small spatula; a soft mass of cotton is then grasped by a pair of dressing forceps and used as a plunger to carry the boracic acid into the bowel. Applications of this sort will often secure an evacuation of the bowels in the course of an hour or two. The best time for the application is before breakfast. The applications are also useful made in the afternoon or evening, especially in very chronic cases. Cases in which this method is found most useful are those in which constipation is due to loss of sensibility in the nerves of the rectum, in consequence of impairment of the normal reflexes by which nature calls for an evacuation of the bowels.

This remedy will be found very valuable in cases of leucorrhœa of the rectum. In cases in which irritability exists, the boracic acid must be mixed with twice the quantity of powdered starch, or an equal quantity of subcarbonate of bismuth.—*Mod. Medicine.*

A New Parasite in America.

The announcement of the discovery in this country of the "Distoma Ringeri," by Prof. Ward, of the University of Nebraska, is attracting more attention abroad than at home. This fluke has hitherto been found only in the far East—China, Japan, Corea and Formosa—where it infests the lungs of man, giving rise to periodical hemoptysis (Foster's Med. Dict.) and chronic cough with rusty mucoid expectoration. Already we are told that if this parasite "is now endemic in America we may expect to hear more about it soon, not only as a parasite of the lower animals but as a cause of endemic hemoptysis in man." Here is a brilliant opportunity for the men who are "in love with a microscope" and prone to "flirt with pathologic specimens." Endemic hemoptysis may soon become as fashionable as appendicitis.—*Jour. of the Amer. Med. Ass'n.*

A NEW invention called the thermogen is now being tried in several of the English hospitals with marked success. The object is to sustain the heat at a uniform temperature when artificial means are required, and of course its use would be limited to hospitals or institutions where the necessary facilities are easily obtainable. The thermogen consists of a light quilt containing a coil of wire bent in the form of a gridiron, inclosed in insulating and non-conducting material, and imbedded in cotton, wool or other soft substance, with a silk or woolen covering. The heat is produced by the resistance of the coil to the flow through it of the electric current. A uniform temperature of about 150° can be maintained for any length of time, the heat being prevented from going above that by the melting of a fuse which instantly shuts off the current. In those houses lighted by electricity the quilt can be connected with the ordinary incandescent terminals, but the principal use of the quilt would be confined mostly to hospitals, during lengthened operations, or in those attended with hemorrhage. —*Ed. N. Y. Med. Times.*

Untoward Effects of Quinine.

Dr. J. Schenck of Carmel, Ill., cites (*Jour. Amer. Med. Assoc.*) instances in which quinine produces a herpetic eruption on the lip, ear, cheek or prepuce. He also reports a case where five grains produce acute coryza. In an elderly woman ten grains during half a day will produce large, reddish-purple blotches on the ulnar margin of the left hand, and another, about the size of a half-dollar, on the upper portion of the left concha; the eruption is accompanied by a hot tingling sensation, and disappears during the following twenty-four hours after the remedy has been given; the same train of symptoms invariably occur after quinine. In another case twenty grains, given in four-grain doses two hours apart, invariably produces a similarly colored condition of the skin, on the back of the left thumb, between the first and second joints. The burning sensation is very severe, the epidermis is raised into a blister and afterward shed. In another patient twenty grains will cause the mucous mem-

brane covering the glans penis to change to a dark purple color, accompanied by intense itching, followed by the shedding of the epithelial layer in the course of the following week. In a fourth case four grains will cause a most annoying itching of the glans penis in from thirty to sixty minutes after it has been taken. If taken at bedtime the itching will continue until morning. The party is about fifty years old, and during the last eight or ten years of his life this effect has invariably followed the use of quinine, while previous to that time this effect was not noticed, although he has taken quinine frequently since early childhood.—*Medical Standard.*

SURGERY.

The Cause and Prevention of Neuralgia in Amputation Stumps.

Witzel (*Centralbl. f. Chir.*) holds that neuralgia after amputation is not caused, as is generally supposed, by the formation of neuromata at the ends of the divided nerves. He states that if such were the case it would be necessary to lay aside the amputating knife. The neuralgic pains, he believes, are due to adhesion of the neuromatous swelling to the end of a bone. In order that its functions may be properly performed a nerve should move freely in its sheath. The structural elements which serve the special functions of a nerve are during life extremely delicate and almost fluid. The ordinary movements, therefore, of an adjacent joint would interfere with the structure and functions of the nerves of a limb if these nerves had no longer free range of movement in the direction of their long axes. In two cases of neuralgia after amputation in which Witzel had opportunities of dissecting the stumps he found thick neuromatous swellings at the ends of the divided nerves, which were bound down by tough cicatricial tissue to the ends of the bones. It is evident that during movements of the stump at the nearest joint the fixed nerves must be stretched, those on the flexion side during extension and those on the extension side during flexion. In neuralgia caused by confinement of a nerve in a mass of callus the pain, it is held, is due to the prevention of the nerve's movement and not to its compression. As a preventive treatment Witzel recommends that in every amputation as much attention should be paid to the nerves as to the large arteries, and that the former should be pulled away from the flaps and divided high up. Attention should be particularly directed to this precaution in cases of amputation at the ankle and shoulder.—*Epitome, British Medical Journal.*

Deformities in Knee-Joint Disease.

Dr. A. M. Phelps contributes an article to the New York *Medical Record* on the etiology of the deformities occurring in knee joint disease, in which he carefully reviews the old theories of deformity and concludes that typical deformities are produced by change of leverage and action of muscles due to:

1. A voluntary effort to relieve pressure and pain.
2. Involuntary spasm and contraction of muscles, which increases the deformity by advantage of leverage due to flexion.
3. Nervous irritation of groups of muscles due to localized lesion in or about the joint.
4. Exceptional deformities are produced by pathological destruction of bone or soft parts.
5. Outward rotation of the leg is produced by spasmodic contraction of the biceps after flexion has taken place. Flexion allows lateral and rotary motion at the joint.

The Use of the Catheter After Labor.

Recht (*Journ. de Medecine et de Chirurgie Practiques*) shows that on the evidence of repeated observations micturition is almost always spontaneous. In 6,666 labors under Pinard's care in the course of the last four years, the catheter has been used only twenty times, and in the 1,920 labors last year only three times. Pinard objects very strongly to routine use of the catheter, which even in skilled hands often sets up cystitis. The practice in Paris lying-in hospitals is, however, very varied. At the school of midwives nearly every newly delivered patient has the catheter passed. Maygrier, at the Pitie, delays the use of that instrument until twelve hours have elapsed after labor without the patient being able to pass water voluntarily. Bar allows a maximum of eighteen hours; Parak and Budin, twenty-four; Tarnier, thirty-six; Champetier de Ribes, forty-eight. Ribemont Dessaigues, at the Hopital Beaujon, objects to the catheter as strongly as Pinard. Boissard finds that not only is there danger of cystitis when the catheter is passed after labor, but the patient is liable to lose the power of voluntary micturition for many days through nervousness.—*British Medical Journal.*

Senile Osteomalacia of the Coccyx, Sacrum and Spinal Column.

At a meeting of the Society of Practical Medicine and Surgery M. Reliquet gave the history of a case which had given rise to the most varied diagnoses. It related to a man who died at the age of 70, and whose autopsy failed to show the presence, in any portion of the tissues examined, of the least nodule of cancer or tubercle. The coccyx, sacrum, and the part of the left ilium adjacent to the sacrum, the last lumbar vertebra, and the other lumbar and dorsal vertebræ presented the unmistakable aspect of localized senile osteomalacia (softening of the osseous tissue, engorgement of areas by black blood, disappearance of the sacro-coccygeal articulation, etc.). In the commencement of the affection the patient had presented all the symptoms of sacro-coccygeal arthritis, with spontaneous pains, localized in the coccyx, and transitory congestions of the rectum and prostate, the

latter of which symptoms had occasioned the diagnosis, by a surgeon, of cancer of the prostate. The duration of the first stage was six months. The second period was a little longer and was marked by the invasion of the sacrum and the left side of the ilium. From this time the pain extended over all the surface of the sacrum and at the same time a considerable œdema occurred, at first confined to the side of the sacrum, subsequently spreading to the buttocks, and finally invading the entire left lower limb. A vague sensation of fluctuation communicated to the touch, joined to the above signs, excited the suspicion of an abscess situated at the sacro-coccygeal joint. Nevertheless, the patient entered a third and final stage, characterized by a lateral S-shaped curve of the vertebral column and the development of cerebral disorders, such as disorderly movements of the face and jaws, incoherence of language, etc. At the same time the pain became intolerable, the œdema extended to the hips, the buttocks, and both lower limbs, the urine became purulent, and the man finally died in a state of coma.—*Le Progres Medical.*

Chloroform Anæsthesia Without Danger.

Dr. G. Maurange recommends the subcutaneous injection of the following solution as a preparatory and prophylactic measure before administering chloroform:

℞ Neutral sulphate sparteine..... grs. ivss.
Muriate morphine..... grs. jss.
Sterilized water.....ad., ʒijss.

Inject 1 cem. of this solution a quarter of an hour before administering the anæsthetic.

Out of one hundred and six operations where chloroform was employed with preliminary injection of this cardiac stimulant, not a single disagreeable symptom was observed, however long the subject was under the anæsthetic. The period of excitement was suppressed and the absorption of the anæsthetic was reduced to a minimum on account of the morphine.—*Cin. Lancet.*

Aseptic Vaccination.

Graff (*Northwestern Lancet*) urges that the bad effects alleged of vaccination are chiefly possible by failure to make the operation aseptic. He thinks all such risks may be avoided. He employs sterilized lymph in a sealed glass tube. The skin is thoroughly washed and rubbed with a two per cent. solution of lysol and dried. The old-fashioned lancet is disinfected by boiling or with the same solution, care being taken to remove all traces of the disinfectant. The tube is then opened and a drop of virus placed on the point of the lancet, with which he makes three slight "picures" just through the epidermis about one inch apart. Finally the space is covered with gauze or absorbent cotton, secured in place by a roller bandage or rubber adhesive bandage. The dressing is not to be removed for three weeks, or if accidentally displaced it is to be renewed. By this method he obtains typical vesicles with little redness and no fever, swelling or pain; the only inconvenience being a little itching. The contents of one tube will do for five to seven vaccinations, but these must be done at once, since after opening it will not remain aseptic.—*Phila. Polyclinic.*

Abortive Treatment of Gonorrhœa by Permanganate of Potash.

Large injections of permanganate of potash methodically used is the best method of treatment yet introduced. Its advantages are: being absolutely painless in cases of anterior urethritis, and scarcely painful in cases of inflammation of the whole tract; it can be commenced or left off without inconvenience; it has no detrimental action on the mucous membrane, but suppresses every trace of discharge from the first lavage, and is successful about eleven times out of fifteen. The size of the injection, and its frequency and strength, must be adapted to individual cases. Generally strengths of 1 to 4,000, or 1 to 2,000, or even 1 to 1,000 are tolerated.—*Revue de Therap. Med.-Chir.*

Dr. Gordon Sharp (Leeds), for the prevention and treatment of chapped hands, and as an antiseptic and deodorizer for the hands, advises:

℞ Spir. of camphor,
Spir. of nitrous ether,
Strong acetic acid..... āā part j.
Mix and add:

℞ Glycerine..... parts xiij.

Wash the parts with warm water; dry, and rub in the liniment at bedtime. The application dries in a few minutes. It may be applied again in the morning and washed off in a few minutes. Owing to the production of acetic ether the application has an agreeable odor.—*British Medical Journal.*

Diet in Severe Forms of Diabetes.

Schmitz (*Deutsche Med. Wochenshrift*) insists that in the severe forms of diabetes, when the patients are much reduced and the proportion of sugar in the urine continues to be high in spite of exclusive albuminoid and fat diet, it is better to almost exclude meat from the diet list and give in its place more fat and a moderate amount of carbohydrates. He gives several histories of cases where the patients had been reduced to mere skeletons on the ordinary anti-diabetic diet. This had at first helped, but latter had failed altogether to keep down the high per cent. of sugar in the urine. By giving much less albumen and more starch and fat, the amonnt of sugar in the urine was in a few weeks reduced from 5 per cent. and more to less than 1 per cent. in some cases with decided improvement in general health.

Treatment of Gonorrhœa.

Dr. Da Costa treats acute gonorrhœa by spraying the canal with a 15-volume solution of hydrogen peroxide, then applying an antiseptic solution consisting of oil of cinnamon dissolved in liquid vaseline, beginning with a one-drop-to-the-ounce solution for the first day, and afterward using a three-drops-to-the-ounce solution.

Diday recommends a five-per-cent. solution of nitrate of silver. The urethra is compressed at the posterior part, and the anterior portion of the urethra is filled and distended by the injection. Six out of eight cases were cured in ten days.

Janet employs a solution of permanganate of potash introduced by means of a siphon, affording sufficient pressure to carry the solution into the bladder. The solution should be used warm and immediately after urination. It should be encouraged to enter the bladder by having the patient make efforts at emptying the bladder while the injection is being made, the orifice of the urethra being compressed around the nozzle of the siphon so as to prevent the escape of the liquid. The more intense the inflammation, the weaker the solution should be. In severe cases the proper strength is 1–4000; in moderately severe cases, 1–2000; if acute inflammatory symptoms are absent, 1–1000. A weak solution employed slowly, so that it is retained for some time in contact with the mucous membrane, produces the same effect as a strong solution employed for a shorter time. In severe cases an injection should be made once in four hours; in subacute inflammation, once a day, or once in two days. A whitish secretion occurs a few hours after the injection, then the surface becomes dry. Ten or twelve irrigations are usually required to effect a cure.—*Modern Medicine.*

Ichthyol in Gonorrhœa.

One of the latest uses suggested for ichthyol is the treatment of gonorrhœa, for which it is employed in injections of a 2–5 per cent. solution. It is also used for primary and secondary catarrh of the bladder in a ½–1 per cent. solution. The advantages claimed for it are:

1. A rapid cure of simple gonorrhœa through the destruction of the specific organisms.
2. An antiphlogistic and resolvent effect.
3. The prevention of stricture.
4. The painlessness of the application, and the relief of pain when present.
5. In the treatment of catarrh of the bladder, the destruction of germs, the prevention of ammoniacal fermentation, and the relief of a catarrhal condition of the mucous membrane.—*Modern Medicine.*

Strontium Lactate as a Diuretic.

Dr. A. Ried (*Therap. Blatter*), from his extensive experience with strontium lactate in Bright's disease and other dropsical affections, arrives at the following conclusions:

1. In many cases of Bright's disease strontium lactate diminishes the proportion of albumin in the urine to a considerable degree; this does not apply in cases of contracted kidney.
2. The administration of the strontium salt in the form of powders frequently gives rise to nausea and vomiting; the remedy should therefore be given only in solution (3 to 4 tablespoonfuls of a 1:6 aqueous solution daily).
3. Strontium lactate, thus administered, acts decidedly as a diuretic.
4. Strontium lactate may be recommended, owing to its diuretic properties, in pleuritic exudations, as a temporary substitute for the salicylates—salicylic acid or its compounds, when given for some length of time, may produce toxic effects, while the strontium is well tolerated even for weeks.—*Amer. Medico-Surg. Bulletin.*

Epididymitis.

Rollet (*Medical Press and Circular*) holds that when epididymitis occurs as a complication of gonorrhœa, irrigation of the entire urethra should not be intermitted, since otherwise there is danger of the second testicle becoming involved. The best treatment, in his opinion, is salicylate of sodium, a drachm and a half daily, or tincture of pulsatilla, 10 drops three times daily. The action of this agent is not as constant as that first named. Refrigeration is the best means of allaying pain; this is produced either by application of ice to the inflamed parts or by the spray of chloride of ethyl. The latter must be used with caution, on account of the sensitiveness of skin of scrotum. Reclus recommends the application of compresses of warm water. Rollet has been using for some time back, with considerable satisfaction, guaiacol, which he applies by means of a brush over the surface daily; not more than 1 gramme, or 20 drops, is used each time. The pain produced by the agent is slight and of short duration, while that appertaining to the malady disappears in about two hours, and the temperature falls.—*Therapeutic Gazette.*

Report of the Collective Investigation Committee on Anæsthesia at the Recent Surgical Congress in Berlin.

Professor Gurlt, Berlin, in presenting the report of the committee on anæsthesia, said that, on the proposition of the society, he had carried out the investigation to a fourth year. In 1893, 63 reports had been received, of which 9 were from abroad. Fifteen reports had been sent from 21 German university clinics. The total of last year's cases was 51,846. Of these, 32,723 were chloroform administrations, 11,617 of ether, 3,896 with ether and chloroform, 750 with chloroform, ether, and alcohol (Billroth's mixture), 2,769 with bromide of ethyl, 91 with nitrous oxide. The total fatalities were 20, and of these, 17 were due to chloroform. The average death-rate was 1 in 2,587 administrations. The death-rate from chloroform was 1 in 1,924.

When the results of the previous year were added, the totals were 163,493 administrations, with 61 deaths. The rate of mortality was: Chloroform, 1 in 2,655; chloroform and ether, 1 in 8,014; Billroth's mixture, 1 in 26,268. In fact, only 1 death had occurred from ether narcosis, and that was a case of heart disease. In correspondence with the low death-rate from ether, its employment had largely increased of late years, from 6,200 in 1892 to 11,600 in 1893. Pichet's purified ice chloroform had been used 3,890 times, with 2 deaths, so it would appear that the dangers of chloroform inhalation did not lie in any accidental impurity; indeed, the facts seemed to point the other way, and that the danger was directly proportionate to the purity of the chloroform. This consideration had lately led to a different mode of administration. It had been given more slowly, and occasionally atropine and cocaine had been used with it. As regarded accidents, 255 severe cases of asphyxia had occurred, and tracheotomy had to be performed three times. Konig's cardiac massage, so called, was frequently used, but not always with success. Ether had, therefore, shown itself the least dangerous anæsthesia, ten times less dangerous than chloroform, but it was not without its shady side: it was dangerous in lung affections. It was agreed to still continue the investigation.—*Therapeutic Gazette.*

Hot Bichloride Poultice.

Rogers (*Northwestern Lancet*) warmly commends, in the treatment of variously assorted septic conditions, bichloride poultice after incision and for drainage. Where this is necessary, the affected part is splinted and is completely enveloped in hot bichloride gauze, or cloths wrung in a hot 1 to 3,000 bichloride solution. Over this is placed a thick layer of absorbent cotton wrung out in the same solution. The whole is entirely covered by a pad of oiled silk, retained in position by a roller bandage. He holds that wherever the ancient flaxseed poultice is indicated, the bichloride can be substituted with eminently more satisfactory results.—*Therapeutic Gazette.*

ARMY AND NAVY.

CHANGES IN THE U. S. ARMY FROM SEPTEMBER 23, 1894, TO OCTOBER 6, 1894.

First Lieutenant Benjamin Brooke, Assistant Surgeon, is relieved from duty at Camp Pilot Butte, Wyoming, and ordered to Fort Canby, Washington, for duty.

First Lieutenant Thomas W. Raymond, Assistant Surgeon, is relieved from duty at Fort Canby, Washington, and ordered to Fort Riley, Kansas, for duty.

Capt. John L. Phillips, Assistant Surgeon, ordered to report in person to commanding officer Fort Walla Walla, Washington, for duty at that station, the assignment to duty at Fort McKinney, Wyoming, being revoked.

Leave of absence for two months and fifteen days, to take effect on being relieved from duty in the Department of Texas, is granted Capt. William B. Davis, Assistant Surgeon.

Leave of absence for one month is granted Capt. Adrian S. Polhemus, Assistant Surgeon, with permission to apply to the proper authority for an extension of fourteen days.

The extension of leave of absence on surgeon's certificate of disability granted Lieutenant-Colonel Joseph R. Gibson, Deputy Surgeon-General, is further extended six months on account of sickness.

NEWS AND MISCELLANY.

Mississippi Valley Medical Association.

The twentieth annual meeting of this well-known organization will be held, as previously announced, at Hot Springs, Ark., November 20, 21, 22 and 23, 1894.

The general committee of arrangements held their final meeting on September 1st, in the city of St. Louis, there being present, in addition to the committee, President Scott, of Cleveland; Vice-President Strauss, of St. Louis; and Secretary Woodburn, of Indianapolis. Dr. T. E. Holland, of Hot Springs, presided. All of the preliminary arrangements for the meeting of the association were completed.

Owing to the hearty cooperation of the railroads, the arrangements in this direction will surpass those of any previous meeting. On motion of Dr. I. N. Love, of St. Louis, a committee of five railroad officials was appointed to secure the desired reduction of rates. This committee consists of Messrs. Townsend, Crane, Snider, Wishard and Ives.

The interest and enthusiasm manifested in all parts of the country concerning the meeting in November are certainly remarkable. The fact that Hot Springs is to be the place of meeting will probably be an inducement for many to attend. From the large number of favorable responses to his preliminary announcement, the secretary feels justified, even thus early, in predicting an attendance double that of any previous meeting of the association.

Let every doctor who can possibly leave home for a few days go to Hot Springs in November. Let him take his family and his friends, and not only a profitable meeting, but a royal good time will reward him for the exertion.

FREDERICK C. WOODBURN,
Secretary.

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ORIGINAL ARTICLES.

OLIVER WENDELL HOLMES, PHYSICIAN.

A. L. BENEDICT, A.M., M.D., Buffalo, N. Y.

It is not often that a member of our profession attains more than local eminence; still less frequently does a physician achieve immortality in literary or scientific pursuits without forfeiting his allegiance to the medical profession. In recalling the life of Oliver Wendell Holmes, it is not enough to say that he once studied medicine, that he was a doctor before he was a poet and an essayist. The best of his life is identified with medical teaching and medical practice. Even after retiring from the active pursuit of his calling he was none the less a doctor, none the less the professional brother of every honorable physician. He is the eloquent orator, the brilliant essayist, the quaint satirist, the kindly poet, not *from* but *of* the medical profession.

As a poet, he was one of a group of five or six bards of second rank who wrote no epic masterpieces and who fell short of the inspiration of Shakespeare, but who appeal to heart and soul as the few greater poets never have and never can. Longfellow, Bryant, Whittier, Lowell, Holmes, represent an era of American development. For many years contemporaries, each in his own style, yet all bearing the common imprint of the aspirations and energy of the New World, they have vindicated the charge that America had only the possibilities of materialistic advancement.

Few poets have been more optimistic than Holmes, few have appealed so generally to the sympathies of all classes. His jollity never descended to the comic, his humor has almost always a tinge of pathos, yet his sadness is never somber.

Every college man—even graduates from professional schools may be included—feels his heart grow warmer and his memory of class and fraternity bonds grow brighter as he reads Holmes' poems addressed to the "boys." The physician appreciates the satire and learns a useful lesson from the "Stethescope Song" and "Rip Van Winkle, M.D." Holmes might be called the poet of commemorative exercises, so many of his happiest strains having been prepared for anniversaries of historic events, for college commencements and reunions, for society meetings and banquets.

Many of Holmes' essays are classics of medical literature. The sound logic and entertaining satire of "Homœopathy and Its Kindred Delusions," the almost paternal kindness and practical wisdom of his "Address to the Young Practitioner" and of similar addresses to students are well worth reading and rereading. His address on "Scholastic and Bedside Teaching," delivered in 1867, anticipated by a generation the recent beginnings of a reform in clinical instruction. In this and other papers he urges the superiority of practical instruction and of actual relief of

human suffering over purely scientific methods; yet in the "Mechanism of Vital Action" and the "Mechanism of Thought and Morals" we have a glimpse of his firm grasp of philosophic principles. In the "Position and Prospects of the Medical Student" his humanity and chivalry burst forth in an eloquent protest against the brutal disregard of the feelings of the patient by a certain grade of students and surgeons and an appeal for the respect due the modesty of the humblest woman.

If Dr. Holmes had never visited a patient, never delivered an anatomical lecture, never attended a medical meeting, his claim to fellowship in the profession and the claim of the profession upon his genius would be insured by his pioneer work in regard to the etiology and prophylaxis of puerperal fever. He proved its contagiousness; he traced the infection from patient to patient, carried by midwife or physician from post mortem or dissecting-room to the lying-in chamber. After more than half a century we can add only the conception of puerperal fever as essentially a septicæmia or pyæmia and the value of chemical antisepsis.

There is a characteristic grim humor in the words in which Dr. Holmes fixes the blame of puerperal fever upon the careless physician or midwife: "It appears a singular coincidence that one man or woman should have ten, twenty or thirty cases of this rare disease following his or her footsteps with the keenness of a beagle through the streets and lanes of a crowded city, while the scores that follow the same paths on the same errands knew it only by name. . . . It is the practical inattention to similar coincidences which has given rise to the unpleasant, but often necessary, documents called indictments, which has sharpened a form of the cephalatome sometimes employed in the case of adults and adjusted that modification of the fillet which delivers the world of those who happen to be too much in the way while such striking coincidences are taking place."

It is also significant that while the bacterial etiology of the fever was not recognized, Dr. Holmes asserts in most unequivocal terms the existence of a material contagion and notes the causative relation of erysipelas: "Within the walls of lying-in hospitals there is often generated a miasm, *palpable* as the chlorine used to destroy it." Summing up several detailed reports, he says: "The evidence appears to me altogether satisfactory that some most fatal series of puerperal fever have been produced by an infection originating in the matter or effluvia of erysipelas." He concludes a most earnest plea for conscientious observance of precautions against communicating the disease with these words: "God forbid that any member of the profession to which she trusts her life, doubly precious at that eventful period, should hazard it negligently, unadvisedly or selfishly."

The rules laid down by Dr. Holmes for practical guidance of the obstetrician will bear requoting:

"1. A physician holding himself in readiness to attend cases of midwifery should never take any active part in the post-mortem examination of cases of puerperal fever.

"2. If a physician is present at such autopsies, he should use thorough ablution, change every article of dress and allow twenty-four hours or more to elapse before attending to any case of midwifery. It may be well to extend the same caution to cases of simple peritonitis. [It is altogether likely that *simple* here means non-puerperal rather than non-septic.]

"3. Similar precautions should be taken after the autopsy or surgical treatment of cases of erysipelas, if the physician is obliged to unite such offices with his obstetrical duties, which is in the highest degree inexpedient.

"4. On the occurrence of a single case of puerperal fever in his practice, the physician is bound to consider the next female he attends in labor, unless some weeks at least have elapsed, as in danger of being infected by him, and it is his duty to take every precaution to diminish her risk of disease and death.

"5. If within a short period two cases of puerperal fever happen close to each other, in the practice of the same physician, the disease not existing or prevailing in the neighborhood, he would do wisely to relinquish his obstetrical practice for at least one month, and endeavor to free himself by every available means from any noxious influence he may carry about with him.

"6. The occurrence of three or more closely connected cases in the practice of one individual, no others existing in the

neighborhood and no other sufficient cause being alleged for the coincidence, is *prima facie* evidence that he is the vehicle of contagion.

"7. It is the duty of the physician to take every precaution that the disease shall not be introduced by nurses or other assistants, by making proper inquiries concerning them and giving timely warning of every suspected source of danger.

"8. Whatever indulgence may be granted to those who have heretofore been the ignorant causes of so much misery, the time has come when the existence of a *private pestilence* in the sphere of a single physician should be looked upon, not as a misfortune, but as a crime; and in the knowledge of such occurrences, the duties of the practitioner to his profession should give way to his paramount obligations to society."

We are tempted to quote from each of the essays mentioned. The difficulty is not to find a passage brilliant enough to be taken from its context, but to select those which might be spared.

A peaceful death, without the pain of sickness, with only the gentle warning of old age, has finished a life of honor to his profession, of service to his country, of gratification to the thousands who have read his poems and essays and realized that they were happier and better from having come within touch of his benevolence and sympathy.

A CASE OF COMPOUND COMMINUTED FRACTURE OF THE SKULL WITH LACERATION OF THE MEMBRANES AND LOSS OF BRAIN SUBSTANCE.

J. B. CRANDALL, M.D., STERLING, ILL.

Edward Heady, single, aged 25, American, a farm laborer, was injured July 19, 1894. I was called by wire to the place of accident, some twenty miles southwest of Sterling, to see the case in consultation with Dr. A. C. Smith, of Tampico, Ill.

The nature of the accident to our patient, which occurred at about 6 o'clock P.M., was from some entanglement of the rope which was attached to the hay fork. While the line was in extreme tension while in the act of hoisting hay with the ordinary horse-power, it snapped asunder, the eye of the cast-iron pulley striking with great force the right side of the head, crushing in bones, membranes, and badly lacerating and pulverizing brain substance. The accident happened some five or six hours prior to my arrival. Dr. S. was present soon after the accident and had the hemorrhage checked, which was excessive upon his arrival. He also rallied him from the shock by the use of subcutaneous injections of spts. vini gallici. The conveniences for an operation and the light were poor.

We immediately put him under the influence of chloroform and gave him the benefit of aseptic dressings. The force of the blow was upon the right parietal bone some 1½ inches posterior from the middle of the coronal, suture and about the same distance from the greatest convexity of the right parietal bone. The opening into the bony vault was some 1¾ inches from anterior to posterior points, while the superior-inferior margins were some ¼ inch less.

There were several pieces of detached bone. The largest was oblong in shape, 1¼ inches by ¾ inch in size. Several smaller pieces were also torn and driven into the brain substance through the membranes.

The dura was badly lacerated from the edge of the anterior central convolution of cerebrum to the interparietal fissure, from which arose extensive hemorrhage that was controlled with iodoform gauze. We also had more or less trouble with superficial arteries of scalp that were retracted so that we had to surround them with a needled ligature.

After elevating and smoothing down the rough edges of the fractured skull

with chisel and bone forceps, we flushed out the wound, removing all of the *débris* of loose brain substance, with hot carbolized water, closed the wound with silk sutures, leaving an opening at the lower border for drainage packed with iodoform gauze.

Before the operation the patient appeared rational so far as intellect was concerned, but his left arm, forearm and hand were useless; and one of the first inquiries when he recovered from chloroform was to know if he could ever regain the use of his hand, as up to this time there had been no improvement in the use of his arm. Patient also complained of an unnatural sensation about the face like a person under the sting of a nettle. In looking for results we see that the areas correlated with facial movements are at the anterior part of the infracentral, while the arm areas are in the middle portions of the anterior and central gyrus. It was impossible to define the boundaries, but it was evident we were very near the line, which was a little anterior to the base of operation. We assured him, not without some doubts unexpressed, that time would eventually restore the use of his arm, and later we were pleased that our prognosis was correct.

After making a nice toilet for the head, the outer dressing being carbolated gauze, we ordered a small powder of pulv. opii. The after-treatment was alternative doses of Hg Cl and pulv. opii for the first ten days. There was paralysis of the bladder and partial paralysis of the bowels for a time. Dr. Smith, who had the after-treatment, told me he used the catheter for a week or more, and that he used injections for the bowels for the same length of time, but that they gradually assumed a normal condition.

He also lost the sense of taste for a time; that came to him after a period of two weeks. Sight and hearing were not affected. Sense of smelling partially lost for a short time.

There was also loss of power of legs as well as loss of power of body; not able to control movements by will power; faulty coördination owing to some disturbance, if not lesion of the cerebellum.

I have not seen the case since the night of injury, but Dr. Smith was kind enough to furnish the facts and all of the interesting features in the case since. At present, some two months after receipt of injury, our subject is up and able to perform light labor; has the use of all the special senses; also has the control of and is able to use his hand and arm. Not as strong as before accident, but it has been gradually returning to its normal condition for the last four weeks. He can see some improvement in strength each day. The wound in the head is practically healed; has overcome his anemic condition; general health good.

From the outlook at present Mr. Heady will be able to resume his ordinary farm labor in a few weeks.

Much praise is due Dr. Smith for the attention and judicious management in the case and after-treatment.

As the results are all we could ask, so far as surgical aid and medical attendance are able to restore, where all kinds of appliances are within reach and educated nurses are at our every call, I fail to see where we could have improved the conditions of our patient in this case.

I often think I would sooner take my chances with a surgeon with ordinary skill, with pure country air, than with an expert in the city hospital with city surroundings. A surgeon may make cuts, but after all it takes nature to heal them up again.

Epistaxis in Children.

M. Verneuil recently read a very interesting communication before the French Academy of Medicine upon the subject of epistaxis in children (*La Loire Mèdicale*). Prof. Verneuil holds that nosebleed in children is due, in a large number of cases, to hepatic disturbance of some sort, especially such conditions as are present in the rheumatic diathesis. He remarks as follows:

"The practice has been to stuff these pale, anæmic children with tonics of all sorts, but this treatment, by predisposing to congestions, is diametrically the opposite of the treatment required by these patients. That which is first of all necessary in these cases is the alkalines, a vegetarian regimen, and cold douches over the liver. This treatment, which I employed in the case of a young man of seventeen years, has given excellent results; the hemorrhages have disappeared."

COMMUNICATIONS.

TREATMENT OF OPEN OR COMPOUND FRACTURES.*

HENRY H. MUDD, M.D., St. Louis, Mo.

An open wound communicating with a fractured bone is a serious complication. Every effort is directed to its closure by sound healing. Its importance and the difficulty of its management is determined largely by the amount of injury inflicted upon the soft tissues about the fracture, and by the extent of the comminution of the bone. This open wound is usually determined by the violence which inflicts the fracture, but may result from ulceration. An oblique fracture where the skin has been torn by the sharp angling of the bone, with or without impact against an external object, offers a good opportunity to convert a compound into a simple fracture.

Fractures by direct violence which is not crushing, even if the bone is comminuted, present often good opportunity for the immediate closure of the wound. The soft parts are not necessarily much injured by such a fracture. This is especially true where the bone is superficial.

Extensive lacerations and contusions of the soft parts with a small or a large wound of the skin preclude an effort at immediate closure of the skin wound. They demand drainage. Even in such conditions a compound fracture may occasionally be promptly converted into a simple one by the agglutination of structures contiguous to the fracture, though the skin opening may remain free for drainage.

Absolute cleanliness is the first requisite in an attempt to convert a compound into a simple fracture. A razor, soap and water are essentials, and must be well used in order to cleanse the skin. The purity of the water used in washing the wound is of first importance. The removal of extraneous matter from the wound may be accomplished by a wash of hot water, but where grease, cloth, and dirt of various kinds are adherent to raw surfaces, the fingers, forceps, etherial soap, turpentine, and sublimated washes may fail to accomplish perfect cleanliness, though the wound may be rendered aseptic and heal readily. A fairly perfect adjustment of the fragments is a requisite of early healing. Maintenance of the adjustment by a well-adapted splint which does not provoke engorgement and pain by undue pressure, is a most important item in the treatment. Many compound fractures where the local conditions would permit primary union of the wound, fail to progress favorably on account of the injudicious application of an apparatus which is good in itself but is imperfectly applied.

The external wound may be hermetically sealed by suture and collodion, if it is small and the soft parts are not extensively bruised. Where the skin wound is extensive, that portion of it which overlies the fractured bone should be closed by suture, if a point favorably situated for drainage can be found somewhat removed from immediate contact with the bone.

If the bone is protruding and has been contaminated by clothing, by a dirty skin, or by external objects, it must be thoroughly cleansed by careful picking and sponging, and then washed with an antiseptic solution, in order that aseptic conditions may be obtained. If the protruding fragment is not essential to solid union, the difficulty of cleansing its surface and the doubtful vitality of the long sharp points of bone, which are denuded of periosteum and bruised by violence, justify its removal by bone nippers or saw. In the more extensive injuries, where direct violence has crushed the soft tissues, comminuted the bone, and driven foreign matter into the wound, the cleansing of the parts and the removal of dead tissue will very often require an enlargement of the wound or an incision to give free access to the injured parts. Fascia and muscle if irretrievably damaged must be cut away with the scissors. Loose fragments of bone are to be removed, and a complete knowledge of the extent of the

* Trans. American Medical Association, Surgical Section, 1894.

injury to the bone and to contiguous parts, including joints, must be obtained. Blood clots should be washed out, and after thorough cleanliness has been obtained, efficient drainage must be provided. The original skin wound may be closed and drainage be secured by special incision, or through an opening made for the inspection and cleansing of the wound. Every effort is to be made to avoid suppuration, as it will destroy still more tissue. It should be remembered that it is difficult to maintain a perfect asepsis about a wound which is slow in healing, hence even where the skin opening can be closed, it is important to so arrange bone and soft tissues as to favor the agglutination of soft tissues about the line of fracture, in order that it may be shut off from the external wound at the earliest possible moment.

Fragments of bone or sharp ends of the fractured surface must not be permitted by malposition to exercise undue pressure upon the soft parts. Angling at site of fracture must be corrected, and if the tendency to shortening is marked and not easily controlled, as it is, not infrequently, where the ankle joint is involved in the fracture, the shortening of the limb by excision of the fractured end is proper and is a conservative measure. The adjustment of the compound and comminuted bone may not be perfect, but it must be practically so good that undue pressure on the soft parts will not induce ulceration, and must be such as to give a good outline and a useful extremity.

Extension and lateral support are the two chief agencies in maintaining apposition of fragments. Wiring of bone and the use of ivory pegs are occasionally necessary and can be used to advantage in isolated cases. They are, however, rarely necessary, and are an obstacle to rapid and solid union, except where they overcome the greater danger of persistent and obstinate displacement.

A solid union will often result without serious constitutional disturbance, even when the fracture remains an open one. The exposed bone will develop granulations, and if a part of it is necrosed, separation by granulation along the line of junction of the dead and living bone will occur, even while new bone is forming at other areas in the line of fracture.

Cleanliness, an easy and comfortable position for the fractured member, free drainage, and a good constitutional condition will generally insure solid union, though it may be long delayed. Union of bone in a compound fracture is much slower than in simple fractures, or than it is in the compound fractures which are promptly converted into simple ones.

Delayed union should be tolerantly dealt with; a persistent maintenance of the conditions which favor the nutrition of the injured leg will very generally be rewarded by a good recovery.

A thorough appreciation of the extent of the injury to the different structures of the extremity must be obtained in cases where the judgment wavers between an effort to save the limb and an amputation. Amputation should be immediate—that is, it should be promptly enforced as soon as the shock has passed, or postponed until the acute inflammation has subsided. A so-called secondary operation is safer than an immediate one.

The perfected technique of aseptic surgery enables us to save many extremities where suppuration with its attendant damages must have supervened and destroyed the limb before the details of antiseptic and aseptic methods were well understood. No less important is the selection of a splint which permits cleanliness, and at the same time insures rest and the undisturbed position of the fracture, which is so essential to the rapid repair of the soft parts and the union of the broken bone. The suspension splint of Dr. John T. Hodgen, with its extension and free motion, is a most important adjuvant in the treatment of componnd fractures of the leg and thigh.

Permanganate of Potash in Thrush. Ω

Drs. Troitski and Karntski (*Gazetta Degli Ospitali*) regard the permanganate of potash as the most efficacious remedy in the treatment of thrush in children. Besides application of an alkaline solution they also employ the permanganate locally in solution. A 2–4 per cent. solution of the bicarbonate of soda may be employed for alkaline irrigation, or in very grave cases a saturated solution of this substance. Besides this the physician should touch, two or three times a day, the affected spots with the following:

℞ Permanganate of potash.....25 | 0 (grs. iv.)
Distilled water.....30 | 0 (℥ j.)

Under the influence of this antiseptic the disease rapidly disappears.—

ICE-COLD APPLICATIONS IN ACUTE PNEUMONIA.*

THOMAS J. MAYS, A.M., M.D.,† PHILADELPHIA.

While cold applications in the treatment of pneumonia are by no means a new procedure, I am of the opinion that this has not yet received the consideration and extensive introduction which it merits, and in saying what I have to say to-night, I trust that I am loyal to that spirit which prompts one to conservatism in the commendation of any curative measure until it has stood the test of experience. When, however, one has observed the magic changes which follow in the pneumonic condition under the beneficent influence of cold locally applied, as has been done by others as well as by myself on numerous occasions, I feel that this method has passed the experimental stage of clinical medicine, and I therefore hope that you will pardon me for appearing obtrusive when I again direct your attention to this subject.

Cold has been employed in the treatment of pneumonia for various purposes and in various ways. Jürgensen believes that the chief danger in this disease arises from the high fever, and which finally leads to cardiac failure. He appeals to the experiments of Zenker and others to show that high fever is detrimental to the fibers of the heart muscle and to those of the voluntary muscles. He therefore recommends cold principally with a view of reducimg the pyrexia. It is a question, however, whether a high temperature of itself is more fatal in pneumonia than a low one; but this is a point which will be referred to later on. So far as I know, Niemeyer was the first to apply cold immediately to the chest for the purpose of reducing the activity of the local inflammatory process in the lungs.

It must be seen that these different views govern the practitioner in the mode of applying this remedy. If he believes in the constitutional nature of the disease, and especially if he thinks that the high fever endangers the integrity of the heart muscle, his principal aim is to reduce the fever at large, and to accomplish this he immerses his patient periodically in a cold bath, which is done by Jürgensen and others. If he holds that the local trouble in the lung is responsible for the high fever, and that this constitutes the vulnerable point in the disease, he will pay less attention to the general condition and make his cold applications directly over the inflamed lung.

I believe that much of the ill-success which has followed the use of cold in pneumonia is attributable to the fact that it was employed according to the first method. The pyrexia of pneumonia is not the same as that of typhoid fever, or at least it does not yield to cold in the same way as that of the latter does. The former is best subdued by cold being applied directly over the affected lung as well as to the head, and general baths or spongings do not seem to be essentially indicated, and if the latter are applied they do not keep the fever down for any long period. If the fever and a great deal of the constitutional disturbance of pneumonia depends on the inflammatory process in the lung, then an abatement of the pulmonary disorder will strike at the very root of the difficulty, and it is clear too that the measure which accomplishes this must be applied continuously and persistently, and not, like in typhoid fever, at stated intervals. Moreover, it is a hazardous procedure to subject a pneumonic patient to the bodily changes and cardiac strain which are incidental to the giving of a general bath. It must be remembered that the heart is always implicated in pneumonia, and is therefore a weak and easily assailed organ.

How then is the cold to be applied, and how long must it be continued? The affected area must be surrounded with ice contained in bags which are wrapped in towels. If the disease is confined to the front base on one side, one good-sized bag will suffice; but if the exudation extends to the side and back, then at least one more bag must be applied laterally and as far back as possible. If the affection is

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extensive, put on as many ice-bags as are necessary to cover the whole area. Watch the morbid process, for it is very apt to migrate from one spot in the chest to another, and if it does so, follow it up with the ice-bag.

The length of time for which cold is to be used must, in most cases, be decided by the amount of fever which is present. If this falls to or near the normal point, and shows a tendency to remain there, then the ice may be gradually removed. It is best, however, not to be in too much haste in withdrawing the cold, for frequently before this is off very long the temperature suddenly flies up again. If this takes place, and the temperature remains high after the ice is reapplied for some time, it is a possible indication that the inflammation has invaded a new field, and is not active in the old one. This has happened several times in my experience.

It must always be borne in mind, however, that the ice is not solely employed for the purpose of reducing the fever, but rather with the object of circumventing the exudative process and of hastening resolution in the affected part. There may be very little fever present in some cases of pneumonia, as in the aged, yet the destructive changes are going on in the lungs at a rapid rate. In senile and latent pneumonia the activity with which the ice is employed must be governed entirely by the impression which is made on the pulmonary disintegration. This must be the objective point and not the temperature.

This brings me to say something on the fever in pneumonia as a prognostic sign. Although a temperature of 105° F. is generally regarded more dangerous in the adult than one of 102°, I really believe that this is an error. When the fever is excessive, as when it rises to 107° or 108°, every one admits that this is almost necessarily fatal; but it must also be granted that a markedly low pneumonic temperature, as for example 95° or 96°, is equally fatal. The safety point, if such there be, lies somewhere between these extremes; and within a certain range I think we can look upon this fever as an indication of the degree of vital resistance which is present in the body. If it remains between 104° and 105°, the prognosis is good, provided other conditions are equal; but if it is either very high or very low, it is evidence of serious exhaustion and of vital inadequacy to cope with the destructive forces.

This opinion is partly confirmed by the high authority of Dr. Wilson Fox, when he says, on p. 352 ("Diseases of the Lungs and Pleura"), that "the extent of the pyrexia has a less unfavorable influence on the prognosis than might be expected." Out of a total of 353 cases he shows, on the same page, that the mortality from 107° to 110° was 100 per cent.; from 106° to 107°, 42.8 per cent.; from 105° to 106°, 18 per cent.; from 104° to 105°, 7.4 per cent.; from 103° to 104°, 17.6 per cent.; and under 103°, 36.9 per cent.

What, now, is the local action of cold on the pneumonic process? This, I believe, consists in its powerful influence on the pulmonary capillaries and in its ability to resolve the exudate and infiltrate. It is well known that the most apparent lesion in acute pneumonia is an enormous distention of the pulmonary capillaries, with partial or complete stasis of the blood in these vessels, exudation of fluid constituents of the blood, and proliferation and accumulation of epithelial cells, and diapedesis of white and red blood-cells in the alveoli and bronchioles. Now it is well known that cold has the power of contracting blood-vessels, and from this action it can be understood why it should be of benefit in pneumonia. But how it can dissolve an exudate or an infiltration is not so clear to me. That it accomplishes this I am firmly convinced. For example, there is a pneumonic area which is wholly devoid of vesicular sounds, and has a flat percussion note and bronchial breathing, indicating beyond doubt that the process has passed beyond the stage of engorgement and into that of exudation or of infiltration; yet the application of ice to this spot will in a remarkably short time develop a new group of physical signs, such as crepitation, reappearance of the vesicular murmur, diminution of flatness, etc. This has not only been observed by myself over and over again, but is also dwelt on by Dr. Lees, who had an extensive experience in the use of ice in this disease, when he says (*Lancet*, November 9, 1889, page 894): "In many cases I noticed a striking arrest in the development of the physical signs," and that the ice-bag "distinctly tends to repress the inflammatory process in the lung."

Is the ice treatment applicable in croup-

ous or in acute catarrhal pneumonia, or in both forms of the disease? In my earlier experience I inclined to believe that it was only adapted to the treatment of the croupous variety, but further familiarity with the measure taught me its use in the acute catarrhal form. I have also given it a trial in chronic broncho-pneumonia and in pulmonary phthisis, but with rather indifferent results, if not with positive harm in some cases. I must admit, however, that in several cases of this kind it seemed to do exceedingly well. It must be borne in mind, too, that the ice-bag is strongly recommended by the late Dr. Brehmer and by Dr. Detwiler and others in the treatment of chronic lung trouble, and with such excellent testimony in its favor it is very probable that many of us do not yet understand the specific indications for its use.

Besides being useful in croupous pneumonia and in acute catarrhal pneumonia, it also has excellent effects in the capillary bronchitis of infants and in the catarrhal pneumonia which follows measles, diphtheria and scarlet fever.

It is also desirable in this connection to say something regarding the heart in this disease. From the tenor of much that is said and written on pneumonia at the present time, one receives the impression that more is to be feared from cardiac than from pulmonary failure. That the heart's function is impaired no one will, I think, deny. Indeed, this could not be otherwise, for the heart and lungs have a common nerve supply, are bound closely together by the pulmonary blood-current, and whatever invalidates one must also affect the other; but I believe that the doctrine that pneumonia becomes fatal because the heart is unequal to the work of forcing the blood through the engorged lungs, and all that we are required to do is to stimulate and to goad this organ, unmindful of what is going on in the lungs, is as imaginary in its conception as it is fatal in its practice.

The pulmonary circulation is undoubtedly obstructed, and there is no question but that the heart chafes, frets, and becomes seriously embarrassed. Dr. Wilson Fox (op. cit., p. 285) says that "one of the most important consequences of pneumonia on the circulation is the occasional occurrence of thrombosis in the pulmonary vessels leading to the affected part. This event, caused in all probability by the retarded circulation in the lung, is no uncommon, and may, by extending to the larger branches of the pulmonary artery, be a source of immediate danger from sudden death, and may also, in great probability, retard the process of resolution and the subsequent convalescence." But is this any reason why we should whip up this organ in the hope that it may perform an impossible task, and stand by and do nothing to alleviate the blockade in front? Is this sound sense or physiological reasoning? No. We must discard this cart-before-the-horse theory and make strenuous efforts to remove the difficulty in the lung, and in this way liberate the heart from its entangled situation. To accomplish this very end there is no measure more efficacious than ice, and besides removing the engorgement and even the exudation in the affected lung, it also acts as a powerful stimulant to the heart's function. Indeed, it is chiefly for its serviceable influence on the heart that the ice-bag is recommended in chronic lung diseases by Dr. Brehmer and others.

In conclusion, I beg to say that the external application of cold in typhoid fever has reduced the death-rate from this disease to almost nothing, and I am sure it is not too much to presume that the same remedy, although differently applied, will do the same in the case of pneumonia. My opinion is based on what I have seen in my own practice and in that of others. In my collective report of fifty cases from various sources (see *Medical News,* June 24, 1893), there were two deaths. Since the publication of this list, I received abstracts of seventeen other cases treated by Dr. Jackson, of Brockville, Ontario, together with seven cases collected by myself, without a death, neither the histories of which, nor those of Dr. Jackson, had I time to write out since receiving the kind invitation from your Board of Directors to prepare a paper for this evening—making in all seventy-four cases of pneumonia treated with cold applications, and two deaths; or a death-rate of 2.70 per cent.

Now, the death-rate from pneumonia, when treated according to the current methods, is variously estimated from 20 to 30 per cent., hence the results from the cold-water treatment are at least ten times better than those which are obtained by other methods.*

MASSAGE *VERSUS* REMOVAL OF THE SOUND-CONDUCTING APPARATUS IN NON-SUPPURATIVE CASES OF DISEASE OF THE EAR.*

LOUIS J. LAUTENBACH, M.D.,† PHILADELPHIA.

It has of late years become more and more evident that the symptoms of defective hearing, tinnitus, and vertigo, when not due to a disease of the auditory nerve, are occasioned not by a pathological drumhead, but rather by some lesion in the sound-conducting apparatus. The ossicles, instead of being freely movable one upon the other, are more or less rigid from abnormal attachments between them, or the walls of the middle ear cavity, or both. In consequence of these attachments the true arch of the ossicles has been disturbed and the stapes is driven into the oval window, often ankylosed, causing pressure on the labyrinth. This pressure on the labyrinthine fluid occasions the periodical vertiginous symptoms as well as the tinnitus, the defective hearing being due to the rigidity of the conducting apparatus and the contraction of the ossicular arch. This conducting apparatus may be compared to the levers and hammers of the piano. When the key is touched, if the joints of the levers are freely movable the hammer strikes the vibrating string; but should there be any rigidity in the mechanism the key must be struck with more force to produce an equal effect.

The membrana tympani, to which formerly such supreme importance was given as the essential to hearing, is now known to be of little value in this respect, serving as the outer fixation point of the ossicular chain and preserving by its elasticity the normal ossicular arch, being to some extent a protector of the middle-ear cavity, preventing the ingress of foreign bodies and being only to a slight extent concerned in the function of hearing by concentrating the sound-waves to the handle of the malleus. It is to the proper movements of the ossicles that we are indebted in the main for the conveyance of sound. If these are abnormally limited in their motion, either by attachments or overweighting, or by a shallowing of the middle-ear cavity, due to the impaction of the stapes or retraction of the membrane, thus shortening the ossicular arch, sounds are not carried at their normal intensity.

It is to these cases of ossicular attachments, overweightings, and shortened ossicular arches that the methods of treatment, pneumo-massage, and ossicular removals are adapted. Ossicular exercise, which I usually term ossicular massage, has for its object the regular movement of each ossicle one upon the other, with the consequent changes brought about as to the nutrition of their joints, from the friction and the increased circulation. It aims to increase the length of the shortened ossicular arch and also to draw out into a normal position a retracted or adherent membrane, while at the same time it endeavors to loosen a jammed stirrup or one more or less adherent to the oval window. In addition to this, pneumo-massage slightly influences the round window and the internal-ear fluids within, and likewise exerts some effect on the upper end of the Eustachian tube, as well as the entire mucous lining of the middle-ear cavity. Its action is mild and regular, simulating the effects of a well-trained masseur. It stimulates the parts, puts the mucous membrane into healthier condition, hastens the absorption of all morbid deposits, and gives to the muscles and ligaments their normal activities, and at the same time amplitude to the joint movements. Its action being a drawing out of the drumhead, with a corresponding outward motion of the attached ossicles, is therefore directly opposite to that produced by air-concussions and loud sounds, which so often, especially when continuous, occasion ear diseases, the whole tendency of modern ear use, due to the multiplicity of shops, factories, etc., being to drive in the drumhead and jam the stirrup in the oval window.

This method is not one of destruction, but of construction; it removes nothing; it allows the parts to remain intact, while it gives to them normal exercise of the

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muscles, ligaments, and articulating surfaces, and an increased and healthier circulation, with correspondingly increased and healthier secretions.

The practical deductions which I have reached, as the result of my use of ear massage, are:

1. The method is not difficult to apply, and can be used by any one who has a proper conception of the structure and functions of the ear, with a knowledge of the pathological conditions present.

2. There is no risk. It has never occasioned harm nor made the symptoms worse, nor does it in any way interfere with other treatment.

3. Should it fail in accomplishing the desired result, it does not prevent the use of further measures.

4. It has improved the hearing in over 90 per cent. of my cases.

5. In about 90 per cent. has the tinnitus been relieved.

6. It has perhaps in a little over the half removed the vertiginous symptoms.

Ossicular removals aim to relieve the same conditions by destroying the continuity of the conducting apparatus by taking out either one or more of the ossicles to the outer side of the ankylosis, usually removing at least one of the ossicles of the ankylosed joint. Of late years this has been modified by, in addition to removing one or more of the ossicles, mobilizing the remaining bone or bones.

As to the practical value of these operations, there is considerable difference of opinion among operators, but I believe the following statements will meet with little or no opposition from the impartial observer; they are formulated from the observations and results of many operators:

1. These operations are difficult. They require considerable skill and experience. Often the operator is not able to see what he is doing, but must feel his way very carefully. They should be reserved for the ear surgeon, as being the one most to be trusted with such delicate work.

2. The risks are considerable. Cases of permanent facial paralysis, persistent vomiting, and even death have occurred; whereas temporary palsy, acute inflammations of the middle ear, and caries are not uncommon results of the operation. Sometimes the very symptoms which called for the operation are exaggerated after its performance.

3. Should the operation prove a failure, it usually prevents the adoption of other measures, being thus truly a last resort.

4. It improves the hearing in perhaps a little over 25 per cent. of the cases.

5. It relieves the tinnitus in about 50 per cent. of the patients.

6. It has in about half the cases removed the vertiginous symptoms.

Having found, in a case unattended with suppuration, the ossicles to be rigid and not responding to the old treatment, we have either to pursue the massage method or that of ossicular removal; but it will be asked, How are we to decide between the two? There is no need to decide between them; the massage treatment should be instituted, and if unsuccessful, then are we to consider the question of operation. I do not believe any case should be operated upon until after the patient has been at least three months under treatment. I have heard operators say that they never operated until after they had thoroughly examined and for a long time treated the patient, and yet I remember one day in April of last year three patients presented themselves at my ear clinic who had been advised to have the operation performed, not one of whom had been under treatment for the ears, even as much as one visit, the opinion being given upon their first visit to an ear clinic.

During these three or more months the patient should be placed under the best hygienic influences, should be treated locally (nose, throat, and ears), as well as generally. Any part of the body needing it should receive proper attention. The ear treatment should include systematic pneumo-massage, and if deemed necessary careful phono-massage. If, after three or more months of such persistent treatment, there is no improvement of any kind, and if we are convinced, in a case of impaired hearing, that the auditory nerve retains its functional value, or that the tinnitus or vertigo, or both, are so great as to justify it, then only can we properly countenance an operation. I feel sure that the need of such an operation will rarely arise, even in a very large special practice. Personally I have performed but twenty-four such operations in five years, treating in that time over 4,000 ear patients.

The first of these I performed in March of 1889, removing the stapes as well as the

incus and malleus; the last in August, 1894, removing the incus only. In no other case have I advised the operation. I have held myself ready to do it in perhaps thirty or forty more, telling the patients that perhaps later it might be necessary, but the need for it has been dissipated by treatment.

There are distinct fields for the use of the massage and the removal treatments, the latter being advisable only where the former fails. I do not think that removal should ever be done without the previous continuous use of massage. To subject patients to operations, with the risk of making the conditions worse, and even that of death, when not absolutely necessary, I consider most reprehensible. After you have tried, and thoroughly tried, all the means at your disposal, including the proper and systematic use of massage, then only, if the symptoms should prove of sufficient gravity, will you be justified in subjecting the patient to the risks before mentioned. I have seen so many of the bad results of ossicular operations (in fact, more than the entire number of operations I have myself performed), and I so often meet with those who have been advised to have it done, and yet have not had their ears thoroughly treated, that I feel it to be necessary to condemn these operations unless they are done as a last resort to relieve either most distressing symptoms or to endeavor to restore hearing which cannot be otherwise improved. For the past few years there has been a great degree of recklessness in advising patients to have these operations performed. I remember the case of a patient with a watch-hearing distance of as much as eighteen inches (18:52) in the to-be operated ear, without vertigo, and but little tinnitus, being so advised. Now what were his chances of gain? Very little, as compared with his chances of loss. He almost surely would have been worse had he submitted to the operation. I will mention a typical case more fully. It proves interesting, from the fact that about six months' treatment has done for her more than any such operation could possibly have accomplished.

Mrs. E. H., aged forty-five years, in the winter of 1891 to 1892 had an attack of the catarrahal type of la grippe, during which time marked tinnitus of both ears developed, with defective hearing of the left ear. In May of 1892, on account of a hypertophic nasal catarrh, she put herself under the care of a throat specialist, who, to some extent, relieved her of the nasal trouble. The ear-symptoms increasing, she was sent to an ear specialist in October, 1892, who advised her, after examining her on two occasions, but not subjecting her to any treatment, that the disease of the middle ear demanded the removal of the ear-bones—that no other treatment was useful, whereas this operation was followed by good results in more than ninety out of one hundred cases; consulting her family doctor, he advised against the operation.

In February of this year she came to me, having in the mean time used no treatment except salt water for the nose and throat.

On examining the left ear, I found that she was troubled with extremely annoying tinnitus, with occasional vertigo, and that she could barely hear a fifty-two-ichn watch on contact; on the right side she had a hearing-distance for watch of twenty-two inches, with occasional tinnitus only.

The left ear, the one which she was advised to have operated upon, was the one to which I devoted my attention. After finding very marked retraction of the membrane, with little or no motion of the ossicles, and finding the auditory nerve in good condition, I subjected the ear to both pneumo- and phono-message, especially the former, twice a week, with the result that her hearing has markedly improved. She now hears the watch at thirty-eight inches, a greater distance than in the good ear, in which she hears it at thirty-four inches.

In the left ear there is occasional tinnitus, only upon taking a head-cold; the tinnitus in the good ear is now more noticeable than in the bad one. The left drum-head, which was formerly retracted and of a dull leaden hue, without any ocular evidence of blood circulation, is now normal in shape, somewhat of a pearly pink color, and fairly well nourished.

In this case the tinnitus has almost entirely disappeared, there is no vertigo, and her hearing is quite fair for one of her age, much better than I have ever seen as a result of an operation on the ossicles. The ear in which the operation was to be

done, indeed, is now better than the ear supposed to be good.

Is it not better to use a method which is painless and which is unattended by any risk, local or general, one which is almost always successful, at least in some degree, and which leaves the anatomical structures so that, if necessary, we can apply other methods, and which, if unsuccessful, at most delays future treatment for from three to six months only, than to subject the patient to an operation which is painful, uncertain in its effects, one which destroys structures that cannot be replaced, so that if unsuccessful, which it is in more than half the cases, the patient leaves all hope behind, and which sometimes intensifies the very symptoms for the amelioration of which the operation was performed? It seems to me that there can be but one answer. In non-suppurative cases of ear disease use massage and other necessary treatment first; in case of failure, then only, the operation.

ALTERATIONS OF THE URINARY STREAM.

Dr. Alexander Payer, of Zurich (*Wien. Med. Presse*), has made a study of the changes in the urinary stream.

Projective Force of the Stream.—A strikingly long stream is characteristic of a pathologically developed detrusor, due to hindrances to micturition in the urethral canal, such as follow moderate strictures, a narrow external orifice, or from spasm of the detrusor. Weakening of projective force of the current is, at a certain age, pathognomic of prostatic hypertrophy, and is seen in weakening of the detrusor from chronic inflammation of the mucous membrane and muscular tissue, from neglected gonorrhœa, in atony from fatty degeneration of the muscular tissue, as in the course of acute infectious diseases, like typhoid fever or dysentery, and from voluntary retention of the urine where micturition is painful, as in stone in the bladder and fissures of the neck of the bladder. A decrease of force is observed in neurasthenics and in spinal diseases and tabes.

Decreased Caliber of the Stream.—Hypertrophy of the prostate, or stricture, will diminish the caliber. In prostatics the current falls vertically down, and in stricture as well, but in the former the force is not increased by pressing, while in the latter it is. Spasmodic contractions of the urethra from general diseases may also cause a diminution of the caliber.

Altered Form of the Stream.—A deviation from the round form is observed as the earliest sign of stricture. In decreased force of expulsion the form is changed. Change of form is not a certain sign of stricture.

Continuity of the Stream.—Sudden stopping of the stream is supposed to be pathognomic of stone, but it is rarely observed except in children. In adults, the stone must be very small and light. It is, relatively, frequently remarked in spasm of the sphincters in neurasthenics.

Starting the Stream, etc.—A drop-by-drop passage of the urine is characteristic of great stricture and great pressure. In some cases there follows a round and strong stream when it started drop by drop; spasm of sphincter.

Dripping of Urine.—Dripping of urine after passage of the stream is a frequent occurrence, and is of varying importance, according as it appears after voluntary urination—a short time after—or in the intervals. It is due to a relaxation of the muscular tissue of the urethra, and the urethra lying in a half-opened condition does not press the urine out over the bulbous portion, so that it accumulates and is suddenly ejected after urination, or it drips away slowly during walking. Narrow strictures also cause it, where the portion posterior to the stricture fills like a sack, and unless emptied by milking movements by the patient, it drains away afterward. Abnormal narrowness of the orifice or very great phimosis are other causes. Involuntary urination may occur at any time, while dripping only follows urination.—*Mass. Med. Jour.*

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SATURDAY, OCTOBER 20, 1894.

EDITORIAL.

THE ETHICS THE LAW TEACHES.

The "code of ethics" has been rather elaborately treated in our medical journals and societies. Many of those discussing the ethical questions inseparable from the honorable practice of the medical profession, do not stay down close to the ground where men live and their work is done, but take flight into the ethereal in seeming blind search for some new beatitude. It is not with the "irregularities," the palpable immoralities, nor those digressions from the lines of professional duty as marked out by the schools, that it is our present purpose to deal. It is with the too free dealing with names and characters, with the slurs, epithets and, what is worse and more damaging, the calumnies uttered against men who have their professional lives to live.

Imputations are something more than the allegation of mistakes or the common imperfections of humanity. Harsh opinions are often ventured upon circumstances and conditions stated by others, and without personal knowledge of the specific facts. An uncharitable opinion may have its foundation upon premises easily fabricated, but the fact of being fabricated does not deprive them of their vicious and damaging elements, nor does it relieve the calumniator of responsibility.

The report of a single act of delinquency, if credit be given it, is at once fatal to the most exalted reputation. Reflections upon a man's conduct or principles necessarily tend immediately to debase him, to degrade him from the position he holds in the favor and esteem of others, and to exclude him from enjoying that degree of success to which his merits entitle him. Every man has the right to the enjoyment of the character and reputation which are the creations of his own exertions and self-denials.

The physician's chief capital is the confidence of his patrons and that of the fellows of his profession. The one who by libelous or slanderous speech impairs or deprives him of this confidence is as much a wrong-doer as if he had deprived him of some specific article of property. The nature of these injuries excludes remedy by restitution. That cannot reach and correct the mischief done. Recanta-

tion is unsatisfactory; it bears the stamp of suspicion and is often forced. Apology always comes too late. Such remedies do not reach down and eradicate the motive and intent, nor go out and undo the evil done. It is impossible to determine how far spoken words of defamation will extend by innuendo. Character and reputation are peculiarly susceptible of injury. Confidence in an individual is destroyed by slight causes. Hence the importance and general necessity of protecting reputation, where the "code of ethics" or the preventive restraints exercised within the profession fail, by the restraints of law through such provisions as meet the exigencies of each and all cases as they arise. The law from the soundest and most obvious principles of justice interferes to protect the man, whatever his occupation or profession, from unjust and malevolent aspersions which deprive him of the profits and advantages which, as a member of the community, he is entitled to enjoy.

Where imputations affect a man in his profession or means of livelihood, the law gives a substantive right of action (Starkey), though the party slandered may be unable to prove any specific loss or damage. This for the reason that a man might be effectually ruined in his business by the slander before his proof of specific damage could be completed. Hence the general rule that words are actionable, without proof of special damage, which directly tend to the prejudice of any one in his profession, trade or business. Said of a surgeon, "I wonder you had him to attend you. Several have died that he had attended, and there have been inquests held on them"—these words were held actionable. So also the words, "He is a bad character. None of the medical men here will meet him," have been held actionable as imputing the want of a necessary qualification for a surgeon in the ordinary discharge of his professional duties.

Generally, it may be said that any words spoken of a professional man that imply unfitness, incapacity or gross ignorance or unskillfulness in his profession, are actionable. This applies in all cases where special damage can be inferred as the natural result or probable consequence of such words. It is actionable to charge a physician with malpractice; case in point: "He killed my children; he gave them teaspoonful doses of calomel and it killed them." This, although a specific charge, was held nevertheless to be a general imputation of malpractice, which amounts to a charge of general ignorance or want of skill. So the mere fact that words relate to a specific case does not strip them of the character of a general imputation, if their effect is to make a general charge of ignorance or want of skill. The false and slanderous may be spoken of a physician's practice in a particular case, ascribing to him only such a want of information and good management as is compatible with great general knowledge and skill in his profession, and when such a case arises, unless some special damage exists, his character will be considered as unhurt and no damages will be presumed. But, on the other hand, it is indisputably clear that a calumnious report concerning a physician in a particular case may imply gross ignorance and unskillfulness, and do him irreparable damage. A physician may mistake the symptoms of a patient, or may misjudge as to the nature of his disease, and even as to the powers of medicine, and yet his error may be of that pardonable kind that will do him no essential prejudice, because it is rather a proof of human imperfection than of culpable ignorance or unskillfulness. On the contrary, a single act of omission of his may evince gross ignorance and such deficiency of skill as will not fail to injure his reputation and deprive him of general confidence.

It is needless to quote further words made actionable by the law. The law,

applying itself to the urgency of these cases, to the protection of character and reputation, proceeds by assessing pecuniary damages for the mischief done. Probably no other method would be so effective in promoting discreet speech as risk of draft upon bank account.

There can be nothing objectionable, legally or ethically, to just and fair criticism of professional qualifications. Such is needful for the correction of errors and to make possible advances in knowledge, but persons in exercising this privilege must confine themselves within the limits of the truth, and are not licensed to traduce or caluminate character by false or malicious statements, recklessly made for the furtherance of private malice or personal ill-will. By harsh, unjust and uncharitable criticisms, by the lash of the tongues of men who never pause to consider the gravamen of their accusations, many a worthy man has been driven to the wall. If every man, professional or other, would carefully study his own experiences he would reverse his judgment as to many of his fellows.

There are men in the profession who would seem to rather pride themselves in their roughness, in their ignorance of those little amenities, the small courtesies and charities of act and speech so easy of practice and so grateful to the recipient. The important consideration in which they alone hold themselves and their professional selfishness prompt them to decry and apply ungenerous and damaging epithets to the fellows of their profession. They would make up for the want of larger ability by noise and bustle. Such men forfeit largely that valuable esteem of the profession and that regard of the communities with which they are in touch, and upon which their influence and usefulness largely depend.

As there is a common sense in men which detects sham, so there is a better sense which detects and despises the ungenerous. All good men and women love to come within the sphere and attractions of those who appreciate and practice what has been called "the small, sweet courtesies of life." It is impossible to measure the extent to which these courtesies take hold of and influence men. They are the talismanic influences which make names to be honored, and which open and widen fields of work and usefulness. The constant exercise of good offices, of professional aid and friendship, will help along a difficult way many a hard-pressed, struggling man.

THE TREATMENT OF STYES.

The *Gazette Médicale de Paris* publishes an article on this subject by M. Ripault, who recommends the repeated applications of antiseptic compresses. After the pus has formed an incision is made and slight digital pressure is employed to aid in the expulsion of the core; hot compresses accomplish the rest. In order to prevent a return of the symptoms, an antiseptic ointment consisting of seventy-five grains of vaseline and three-quarters of a grain of yellow mercury oxide should be applied to the eyelids every night, and both morning and evening the eye should be bathed with a warm solution of borid acid in water or of corrosive sublimate, without alcohol, in the proportion of a grain and a half to fifteen ounces and a half of water.

The preventive treatment is based on the etiological diagnosis. The conjunctiva, the lachrymal ducts, and derangements of refraction are treated; the patient is instructed to take special precautions (using green protectors, avoiding scratching of the eyes, etc.) when his work exposes him to any irritating action, above all if he is subject to inflammation of the eyelids. The general condition should never be neglected. If there is a furucular diathesis, alkaline preparations should be employed such, as sodium arsenate or bicarbonate, and tar water; if the patient is of a lymphatic temperament, tonics and iodized preparations should be employed, and finally, at times, an antidiabetic diet may be useful. The treatment should then be not only curative but above all preventive, and should be local and general.—*N. Y. Med. Journal.*

ABSTRACTS.

VIQUERAT'S TREATMENT OF TUBERCULOSIS.

ARTHUR GAMGEE, M.D. Edin., F.R.S.

The sensational paragraphs which have appeared in various continental journals, and which have been copied into the English papers, announcing the startling discovery of a new and certain method of treating phthisis and other tuberculous affections induced me to telegraph on Tuesday, September 19th, to Dr. Viquerat, of Moudon, asking him whether he would be at home on the following day, as I wished to see him in reference to his treatment of tuberculosis. Receiving an affirmative reply, I left Lausanne by the 5.30 A.M. train and shortly after 7 A.M. reached Moudon, a quaint medieval little town, once the capital of the Canton de Vaud. I was received by Dr. Viquerat with the greatest courtesy, and in my interview with him, which lasted until midday, he manifested the greatest readiness to acquaint me with his method and frankly replied to every question which I put to him.

In the criticisms which I shall feel called upon to make, and the warning which I shall feel compelled to address, I must neither be understood to impugn Dr. Viquerat's good faith and veracity, nor to cast a slur upon his scientific capacity and his professional devotion. It will, however, be my duty to draw attention to the weak links in the chain of evidence which Dr. Viquerat adduces, and to show, as I think, conclusively, that his method of treatment is yet in the strictly experimental, or rather tentative, stage, and that the evidence in its support is insufficient to justify the confident anticipations which have been indulged in. Instead of building castles in the air only destined to be dissipated, let the friends of phthisical patients in England await the calm judgment of those able to form a sound opinion when the necessary experimental and clinical evidence shall have been laid before them and the means afforded of adequately controlling Dr. Viquerat's assertions. The experience of error into which so great an observer as Koch fell, and the fact (which I am bound to refer to) that Dr. Viquerat's enthusiastic nature has led him, on one occasion at least, to announce a therapuetical discovery which has disappointed all expectations, not only justify but compel caution. Dr. Viquerat may rest assured that neither praise nor gratitude nor honors will be grudged him if he prove successful in his struggle with that disease which surpasses all others in the victims which it claims; on the other hand, in the interests of humanity, the leaders of scientific medicine have a right to claim that they shall be allowed to examine the minutest details of alleged medical discoveries before these are submitted to the popular suffrage. The statements in this article which relate to the details of Dr. Viquerat's method of treatment and to his opinions are derived in part from a pamphlet lately published by him,* in part from a report† dated September 3, 1894, signed with the initials "G. P." and of which the writer is a young medical man until recently a student in the University of Geneva, but mainly from information directly communicated to me by Dr. Viquerat in my interview of September 20th.

Dr. Viquerat's method for the treatment of tuberculous diseases is based upon and suggested by principles and general methods which we owe in part to the great Pasteur and in part to two distinguished pupils of Koch, Behring and Kitasato. Pasteur had shown that animals could be rendered immune from the attacks of certain virulent infective diseases, such as chicken-cholera and anthrax, by inoculating them with successively increasing doses of attenuated cultures of the bacteria which occasion them. It was afterward found that protective immunity could likewise be secured by injecting cultures

* Das Heilverfahren der Tuberculose gegrundet auf bacteriologisch-experimentelle Studien. Von Dr. Viquerat in Moudon. Erste Auflage. Mouden Buchdruckerei. J. Kretz-Bettemann. 1894.

† Rapport sur les Resultats obtenous par M. le Dr. A. Viquerat dans son Traitement de la Tuberculose (Geneve, le, Sept. 3, 1894). Imp. Romet, Boulevard de Plainpalais, 26.

sterilized by heat or cultures which had been freed from all bacteria by filtration through unglazed earthenware. Such sterilized or filtered cultures owe their immunizing properties to soluble chemical substances which are produced by the pathogenic bacteria, and which, when introduced in sufficiently large quantities into the animal organism, induce all the phenomena of the special bacterial disease. This immunity against tetanus or against diphtheria can be induced by repeated subcutaneous injections of gradually increasing quantities of the soluble toxic substances which are formed by the tetanus and diphtheria bacilli respectively. It is, however, to Behring and Kitasato that we owe the conception and the actual method for treatment of bacterial diseases by means of the serum of immune animals, and it is they who may be said to have introduced "serum therapeutics." They showed in 1890 that when the blood serum of rabbits which had been rendered immune from tetanus was repeatedly injected subcutaneously into mice these creatures, which are peculiarly susceptible to the tetanus poison, were in their turn rendered immune so as to be ultimately unaffected by the injection of the most virulent cultures of the tetanus bacillus or the strongest solution of its poisonous products. They found, moreover, that the serum of an immunized animal when mixed, outside the body, with a virulent culture or a toxic solution of its soluble products destroyed their power of inducing the phenomena of tetanus. Further, they discovered that the serum of animals rendered immune from tetanus when repeatedly introduced into the body of others already suffering from the disease caused the symptoms to abate and often led to recovery. These beautiful and wonderful discoveries led, in the first instance, to a rational method of treating tetanus as affecting man which, in the hands of Tizzoni, Javel, and others, has enabled them to save many lives which would otherwise have certainly been sacrificed. The same method applied by Behring to diphtheria has led to the treatment of this disease by the serum of horses rendered immune from diphtheria—the treatment which, as carried out by Dr. Roux, the distinguished Chef de Service of the Pasteur Institute in Paris, has reduced the mortality from 63 per cent. of all treated (the proportion of deaths in the cases occurring in a hospital when the old treatment was at the same time being carried out) to 26 per cent., and, as carried out in Berlin, has reduced the mortality from 41 to 15 per cent. of all cases treated (Aronson). If one considers that a large number of the 300 cases treated in Paris and the 274 cases treated in Berlin were in the last stages of the disease, and that in many the gravest complications existed, it cannot be doubted that when the treatment of diphtheria can be undertaken in its early stages the results will be still more remarkable, and that this dreaded disease will, through the beneficent researches of science, have been deprived in great measure of its power of evil.

Inasmuch as pulmonary phthisis and other tuberculous affections are the result of the activity of a pathogenic microorganism, the tubercle bacillis of Koch, it occurred to Dr. Viquerat to employ in this treatment the serum of animals immune from tubercle, and in the first place to endeavor to find some animal easily available to man which possesses a natural immunity for tubercle. It has been shown how *artificial immunity* from the inroads of pathogenic bacteria may be secured, and a few words must now be devoted to *natural immunity*. There exists a natural immunity, relative or absolute, which explains why certain individuals readily fall a prey to specific bacterial diseases, such as the infective and contagious diseases, while others escape scatheless who are placed under precisely the same conditions. There are instances of natural immunity possessed by certain of the lower animals which are very remarkable. Thus the common rat possesses *almost* complete natural immunity from anthrax, while the white rat is readily affected by it. In his inquiries Dr. Viquerat discovered that the only domestic animals which under the normal conditions of their existence have never been observed to become tuberculous are the ass and the mule. Even the horse, as the writer learns from a letter received from Dr. Guillebeau, the eminent Professor of Pathology in the Veterinary School of Berne, is so rarely the subject of tuberculous affections as to have been long held to possess a natural immunity from such diseases; its absolute immunity has in recent times been disproved.

In the articles which have appeared on the subject of the Viquerat treatment the

statement is made that it consists in the injection of the serum of asses' blood into the body of the person or animal affected, and in the pamphlet published by Dr. Viquerat, as well as in the report already referred to, allusion is only made to asses' serum without any mention of the animal yielding the serum having been subject to inoculation with tubercle. Dr. Viquerat, however, brought before the writer facts which prove that the immunity enjoyed by the ass is not an absolute one, and informed him that, in order to strengthen the natural immunity, he subjects the ass or mule which is to yield the immunizing serum to inoculation with cultures of the tubercle bacillus. The ass and the mule, according to Dr. Viquerat, though never becoming subject to tubercle under ordinary conditions and offering a far greater resistance than the horse, do not enjoy an absolute immunity under certain experimental conditions, though he asserts that in the case of these animals the tuberculous affection which is artificially induced *invariably terminates in recovery*. The natural immunity of the animal, he asserts, is reinforced by the temporary disease, so that its blood serum introduced into the body of other animals possesses the power of arresting the progress of tuberculous affections and (if these are uncomplicated) of curing them. The actual process employed by Dr. Viquerat in order to prepare the ass or mule which is to yield the serum for the treatment of tuberculous affections is as follows: 30 c.c. of an active bouillon culture of the tubercle bacillus are injected subcutaneously, and, immediately before or afterward, 15 c.c. of the same culture are injected into the blood-stream through one of the jugular veins. He asserts that subsequently the ass or mule exhibits no rise in temperature or other symptoms of disease, and that the only objective phenomenon is a remarkably voracious appetite. As the animal, according to Dr. Viquerat, invariably survives, no evidence of any tuberculous infection following the inoculation would be available had he not killed a series of donkeys at varying periods subsequent to the operation. As a result of these observations he asserts that if an ass or mule, treated as above described, be killed between the fifteenth and thirtieth day after inoculation, the lungs are found to be pervaded by miliary tubercles which are never surrounded by hyperæmic lung tissue. If the animal be killed between the thirtieth and fortieth day, Dr. Viquerat asserts that the tubercles are found to be disappearing, leaving no trace behind them, while after the fortieth day the lungs are always found to have returned to a condition of perfect health. It is from the forty-fifth day, when spontaneous cure has already been more than completed, that the animal is used to supply the curative serum. With this object it is bled, and the blood is allowed to stand over ice so as to allow it to clot and to permit of the separation of serum. To this serum from 0.5 to 0.75 per cent. of carbolic acid is added, and it is then stored in stoppered bottles until required for use. Without wishing to be hypercritical, I must point out that the above statements are of so remarkable and withal of so improbable a character that they cannot be accepted until the most complete and detailed record of each experiment is published, and until the results are confirmed by independent observers. The number of observations would have to be very large in order to establish the fact that the ass or mule is after inoculation into the blood invariably affected by an acute miliary tuberculosis of the lungs—*a miliary tuberculosis always terminating in recovery*. It may very reasonably be objected that, unless the chances of error were minimized by such a number of experiments as the costliness of the animal experimented upon almost precluded, the probability is that the asses which when killed exhibited pulmonary tuberculosis would in the natural course have succumbed, while those which when killed exhibited no tubercle had probably remained uninfected.

A further criticism which will suggest itself to all who are conversant with experimental bacteriology is that, while Dr. Viquerat has followed up to a certain point the method of Pasteur, of Behring, of Kitasato, and others of inducing immunity against a bacterial disease by inoculation of the bacteria which induce it, his method is altogether exceptional, as he satisfies himself with a single inoculation and furnishes no proof that he has thereby induced *absolute artificial immunity*. But "enough of these pedantic objections" may be the remark of the enthusiast, only too anxious that Dr.

Viquerat's predictions should be immediately accepted. "What are the facts on the strength of which Dr. Viquerat relies?" The first and, as it appears to me, the most promising of all the statements which Dr. Viquerat communicated to me was the following: that when the immunized serum of the ass or mule is injected every second day into guinea-pigs which have been fifteen days previously rendered tuberculous by the inoculation of active tubercle cultures, the tuberculous glands which had become enlarged and perceptible rapidly become smaller and disappear, while the animal, instead of dying fourteen or fifteen weeks after the inoculation, regains perfect health. If the observations made by Dr. Viquerat on this point be accurate, it appears to me that they offer the surest promise that *sooner or later* tuberculous diseases will yield to the treatment by the serum of animals rendered *perfectly immune* in respect of tubercle. But it is on the results which he has obtained in the treatment of tuberculous diseases affecting man that Dr. Viquerat in great part relies. Since February he has treated twenty-five cases, among which are many diagnosed as cases of pulmonary phthisis in its earlier and later stages, as well as others representing various forms of surgical disease *alleged to be* of a tuberculous nature, *no proof whatever being given of the fact.* His usual plan is to inject 12 c.c. of the prepared serum every third day. I saw two patients thus injected, and I can vouch for the fact that in neither of these had the numerous injections to which they had previously been subjected led to any local accident—such, for instance, as suppuration.

All the information which is furnished in regard to the twenty-five cases of alleged tuberculous affections treated up to the present time by Dr. Viquerat is contained in the so-called "report," to which allusion has already been made. This "report"* furnishes the most unsatisfactory and disappointing evidence which can be adduced in support of Dr. Viquerat's statements, and the amusing tone of authority assumed by its author is no less remarkable than the looseness of nearly every statement which it contains. Before criticising the list of cases given in this so-called report, it must be stated that at the foot of the document is printed the following announcement: "Sur la vue de ce rapport médical un Institut vient d'être créé à la Côte-Drize à Genéve, dans lequel M. le Dr. Viquerat continue ses travaux de recherche et où une clinique s'ouvrira le Nov. 1er, 1894. Les tuberculeux seront traités à *l'Institut Viquerat* dans l'ordre de leur inscription." Seeing the importance which, according to the paragraph just quoted, appears to have been ascribed to this so-called report, it would have seemed reasonable not to conceal the identity of its author, and to have furnished proofs, which are doubtless forthcoming, that he has now ceased to be *in statu pupillari*, and that his report may therefore be properly termed a medical report. But to return to the twenty-five cases of supposed tuberculous affections referred to in the report. I must point out that no conclusions whatever can be drawn from the results of the treatment of the surgical cases which are diagnosed as turberculous in character, as no grounds are given which permit of the accuracy of the diagnosis being tested. Hospital surgeons will share the skepticism of the writer in reference to cases reported as follows:

"Case 10.—R., Moudon, multiple cold abscesses, osseous tuberculosis, fistulæ. Improved; still under treatment

"Case 11.—L., Ermanche, tuberculosis of the radius, fistula closed. Pains ceased, improved; still under treatment.

Case 12.—C., Lucens, tuberculosis of the ulna, cold abscess of the neck. Cured."

Turning now to the cases diagnosed as pulmonary phthisis, it is found that they number 15 out of the total 25. Of the phthisical cases 8 are stated to have been in the first and second stages of the disease and 7 in the third stage—*i.e.*, cavities existed in the lungs; in 2 of these 7 cases laryngeal tuberculosis existed. Of the cases in the first and second stages the majority are stated to have recovered, but inasmuch as in these again no details whatever are given, one is compelled to be skeptical. The value to be attached to a diagnosis of phthisis in the first and even the second stage must depend entirely on knowledge of the skill and habitual accuracy of the physician who has made the diagnosis; great, however, must be the faith of the physician who would ac-

* *The Lancet*, September 29, 1894.

cept such notes of a case as the following:

"CASE 22.—M. G——, Penay, pulmonary tuberculosis, first and beginning of second stage. Cured.

"CASE 23.—P., Chesal, pulmonary tuberculosis, second stage; improved; still under treatment."

Passing now to the seven cases of phthisis in the third stage—that is to say, in which the disease had progressed to the formation of cavities—one is said to have recovered. The following are the notes of this case:

"CASE 2.—M. E. C——, Moulin de Penay; pulmonary tuberculosis, second and third stage; acute form (*forme galopante*). Cured."

Is one to suppose that the cavity or cavities have disappeared in the few months which at most have elapsed since this case was treated, or that by "cured" are understood cessation of morbid symptoms and apparent return to health? Unfortunately, the physician knows that even under such circumstances one dare not speak, after only a few months of respite, of a case of advanced phthisis being *cured*. Excluding this one case, of the remaining six cases of phthisis in the third stage one (No. 9) ceased the treatment and died; one (No. 24) became affected with pulmonary gangrene and stopped the treatment; one (No. 25) has not improved, but is still under treatment; and three are said to have improved somewhat, but to be still under treatment.

The above short analysis of the cases which have as yet been treated by Dr. Viquerat's method justifies the opinion, which I expressed at the commencement of this article, that this method of treatment is yet in a strictly experimental or rather tentative stage, and that the evidence in its support is insufficient to justify the confident anticipations which have been indulged regarding it.

Notwithstanding the criticisms which I have felt compelled to make, I would, in conclusion, state that it appears to me that Dr. Viquerat is engaged in the study of facts which promise to lead to results of the greatest practical value, but only on condition that he does not deceive himself and others by supposing that the discovery of the method of curing tuberculous affections is already an accomplished fact.—*Lancet.*

DIPHTHERIA TREATED BY ANTITOXIN.

Hunter Urquhart Walker, L.R.C.P. and S. Edin., late Medical Officer of Health, Worksop, Notts, says (*The Lancet*):

"I was so struck with the results produced, or apparently produced, by this drug that I determined to investigate the matter, and when I had a chance put antitoxin to the test. So I procured a small quantity of Behring's solutions. It is impossible, I know by sad experience, for the hard-worked general practitioner to be thoroughly versed in the great army of new drugs that we have in the market, and I may therefore be pardoned if I state here for the benefit of my readers one or two facts with regard to the drug in question. Antitoxin, I think, deserves special consideration from us, and I shall have attained my object if others will state their experience of the drug and say whether it does or does not bear out what has been said of the new specific.

"With regard to Behring's solution, it has been proved that if a mixture of 0.001 c.c. with the same amount of poison is subcutaneously administered to guinea-pigs, not only are no symptoms of disease caused, but also no local symptoms are observable, especially no infiltration at the place of injection. The antitoxin solution contains 2 to 2.5 per cent. egg albumen and a further admixture of 0.4 per cent. trikresol for preservation purposes. For the immunization of adults and elder children 1 c.c. of the solution is injected subcutaneously by means of a Pravaz syringe which has been previously sterilized by alcohol and three per cent. carbolic acid or one per cent. trikresol solution. For young children up to two years the dose should be 0.55 c.c. The above quantity of antitoxin thus administered to persons threatened by diphtheria is at least ten times as much as is required to render them immune. The immunity from diphtheria is therefore much more lasting.

"I was called in to see the patient, eight years of age, on July 27th. I was told she had been ill for a day or two. She had passed a very restless night. On the 28th the child seemed more restless, the color in the face was rather darker in hue, the pulse quicker and the breathing more difficult. The throat presented much the same appearance as on the previous day. On the 29th the child was distinctly worse, especially the breathing. The fauces on the right and left sides were covered with membrane. In the evening the respiration was very quick. On the 30th the membrane was well formed, even extending well over the soft palate and hanging down into the mouth. Up to this time the child had been treated with iron and chlorate of potash internally and the constant use of the lime-water spray. (One patient under my care just previously—a very bad one—did so remarkably well with the lime-water spray that I naturally did not wish to discard this method of treatment in favor of another of which I had little or no experience.) However, it was evident that something more would require to be done if the patient was to improve, for I noticed that in spite of the treatment another patch of membrane had formed in front of the curtain which hung down from the soft palate. I resorted to antitoxin. Eleven minims of antitoxin were then injected into the forearm with strict antiseptic precautions. The temperature at the time of injection was 103° F., and the pulse 140. In four hours after the injection the child was much improved. There was no fever and the pulse was quite quiet. She had a good night and had to be roused by the nurse to receive her nourishment, which throughout consisted of beef tea, chicken soup, brandy and milk and wine whey. On the 31st I noticed that the same improvement continued, although the membrane was still present. However, it was apparently loosening at the right side. My patient informed me that her temperature was 98.4° F., and I found she was nearly correct, as it was normal. During the day much of the membrane came away. The last patch to form had disappeared. All that was to be seen was on the uvula and on the left side. On August 1st all signs of membrane had disappeared, the temperature was normal and the pulse good. The patient begged to be allowed to have her picture-books in bed. The throat caused her no pain. From that date uninterrupted recovery took place.

"I would especially notice in this case that within a few hours the temperature was reduced four degrees and afterward remained normal. The constitutional disturbance was at once checked, although the membrane still remained on the uvula and left side of the throat. The new patch on the soft palate at once disappeared, and the appearance generally became more normal. The injection in this case, as in other cases where it has been used, was entirely innocuous, being followed by neither local nor general disturbance"

The following reports of cases in which this mode of treatment has been employed are from the *British Medical Journal:*

Mr. J. Townsend Barker, L.R.C.P. Lond., M.R.C.S.Eng., L.S.A., D.P.H. Camb., medical officer for Streatham, reports two cases:

Case I.—A. T., aged 2, a female; taken ill September 19, 1894, with sickness, feverishness and dullness. First seen in the evening, when a patch of membrane was discovered on the right tonsil the size of a threepenny piece. Treatment consisted of a mixture of perchloride of iron and glycerine given every two hours and the painting of the throat with sulphurous acid and glycerine.

September 20th. Temperature: morning, 102.6° F. Pulse, 144. Child dull and heavy. Both tonsils and soft palate covered with membrane and several patches on pharynx. In the evening the membrane was extending and paraffin was substituted for the sulphurous acid paint. The urine contained no albumen. Temperature: evening, 100°. Pulse, 144.

September 21st. The throat appearances as before, but membrane is thinner. A croupy cough has supervened and some laryngeal stridor. Temperature: morning, 102.2°. Pulse, 120. Urine: no albumen. In the evening the temperature had fallen to 98.4°; pulse, 132; the laryngeal symptoms continued though the child had been tent-bedded and steamed all day.

September 22d. The throat somewhat cleaner and less membrane on the pharynx; tonsils still covered; laryngeal stridor and cough continued, though ameliorated. Temperature: morning, 98.4°; child still dull and apathetic; pulse, 132. By the

kindness of Mr. Zimmerman I was furnished with mxx of Aronson's antitoxin, and in the afternoon I saw the child again in consultation with Dr. Wilberforce Smith and injected mxx into the outer side of the thigh. The previous treatment was continued. The child got brighter shortly after the injection. Temperature: evening, 98°. Pulse, 132.

September 23d. Temperature: morning, 97.4°; evening, 98°. Pulse: morning, 130; evening, 130. Urine: no albumen. Throat cleaning; laryngeal symptoms gone; child feeding well and much brighter.

September 24th. Tonsils and pharynx clean. No membrane visible; no laryngeal symptoms. No albumen. Temperature subnormal.

September 25th. A trace of albumen in urine, which disappeared the following day.

Henceforward the child rapidly regained strength, and no further complications have so far ensued.

Case II.—M. T., aged 27, mother of the above. Taken ill on September 22d. Felt chilly and prostrate all day. At night pains in back and limbs came on, with severe frontal headache and slight sore throat. A small patch of membrane was visible on the lower part of the right tonsil. Urine: no albumen. Temperature: evening, 102°. Pulse, 156. Treatment a mixture of perchloride of iron and glycerine every two hours, and paraffin as a throat paint every four hours.

September 23d. Temperature: morning, 100.8°; evening, 100.8°. Pulse: morning, 144; evening, 130. Thick membrane covered both tonsils. Urine: no albumen. Patient took plenty of nourishment, chiefly Benger's food and beaf-tea, and did not object to the paraffin. The throat was ordered to be sprayed with a solution of lactic acid ʒiij in ℥viij of lime-water alternately with the paraffin painting.

September 24th. Temperature: morning, 99°; evening, 100°. Pulse: morning, 124; evening, 110. General and local conditions same as yesterday.

September 25th. Temperature: morning, 97.6°; evening, 99.4°. Pulse: morning, 112; evening, 96. Urine contained a trace of albumen. In the evening the tonsils were cleaner than on the previous day, but coincident with a slight rise in temperature there was an increased feeling of illness and a slight formation of membrane on the anterior pillars of the fauces on each side. I injected mxx of Aronson's antitoxin (all we could obtain). The patient voluntarily described the effect of the injection as that of a powerful stimulant. The feeling of depression from which she suffered passed away in about half an hour, and never returned.

September 26th. Temperature: morning, 98.4°; evening, 98°. Pulse: morning, 112; evening, 96. Urine contained a trace of albumen, which has persisted till the present (October 1st). Patient very cheerful. Appetite good. Tonsils nearly clean; a little thin membrane on both fauces.

September 27th. Temperature: morning, 98.4°; evening, 98°. Pulse: morning, 88; evening, 96. Little membrane on fauces strongly adherent. Tonsils quite clean. Throat raw and sore, bleeding when swabbed. Patient bright and cheerful.

September 30th. Throat quite clean today for first time. Temperature subnormal. Still a trace of albumen in urine. Patient very bright and hungry, though she has taken plenty of nourishment throughout.

Remarks.—The source of infection in these cases was undoubtedly a previous fatal case which had occurred in the same house five weeks before. Case 1 sickened only five days after the family returned home from the country, and I discovered that a screen which had been used to form part of a tent-bed for the earlier case had been removed to the drawing-room without disinfection, for fear the sulphur should blacken the gilt. The sanitary arrangements of the house were very good, and, with the single exception enumerated, disinfection had been very thoroughly carried out. The cause of the earlier fatal case, I was told, could not be discovered. There were no animals kept in the house, but I do not know that the milk supply and laundry were investigated.

With regard to the effect of the antitoxin, these cases cannot be considered conclusive, as in both improvement had set in before its administration, and the same remedies were continued afterward; but the mother had no doubt as to the feeling of relief and *bien-être* which followed the injection, and the child seemed

brighter almost immediately. No local reaction took place in either case at the site of injection.

No conclusions as to dose can be deduced, as in each case I injected all I could obtain, namely, mxx. The paraffin paint seemed to directly affect the membrane, and the nurses told me that the patient used to ask for it before it was due on account of the relief afforded. No cultures were made from the throats, but cover-glass preparations from the membrane showed abundant bacilli, with streptococci, staphylococci and micrococci.

Mr. Henry G. Biddle (Broadstairs) reports a severe case of diphtheria which was successfully treated by injections of antitoxin. On July 23d I was called to see G. A., aged 34. He had complained of sore throat and had felt very ill since July 15th, and had kept to his bed since July 20th. He appeared very ill. Temperature, 101°; pulse, 130. Tongue very foul. Glands much enlarged. Tonsils greatly swollen, nearly meeting in middle line and partly covered by characteristic gray membrane. There was severe headache and the urine contained albumen. Iron and chlorate of potash was given and the fauces frequently dusted with sublimed sulphur. The following day, July 24th, the patient's condition was unchanged.

On July 25th I injected 2½ c.c. of Aronson's antitoxin solution. Temperature rose to 103° and patient became very delirious and violent toward evening.

On the 26th he was still very delirious. Temperature fell to 99° in morning, 101° in evening; 2½ c.c. of the solution injected.

On the 27th the throat was decidedly better. The membrane was beginning to get loose. He was still very delirious.

On the 28th he slept for six hours and woke up quite conscious. Temperature, 100°. Membrane coming away.

From this date the patient made an uninterrupted recovery. He got up on August 2d. Urine was then free from albumen. I have had him under my observation until the present time, and he has never had any sequelæ, no loss of knee-jerk or symptoms of nerve degeneration.

Dr. J. Grant Bride, late Medical Officer of Health, Runcorn Rural Entire District, writes:

Dr. Trevor Fowler's suggestion that the dose of antitoxin, and also that the indications for its repetition, should be definitely stated, is deserving of much attention. At the same time there would be much difficulty, I think, in finding the range and laying down rules for the employment of this recent addition to our therapeutic arsenal. It is comforting to the mind that no ill-effects have been recorded against the free use of antitoxin; therefore I would inject mv in the case of a child aged 1 year and increase it by mj for each year above that age up to 16; the dose for it and up to 20 would be mxx. In severe attacks the dose might be increased and repeated after an interval of eight to ten hours. On the other hand, good results are obtained from small doses in mild cases, but they require to be repeated, whereas a large dose (from 15 to 20 minims) did its work thoroughly without need of repetition. The following cases will support this conclusion:

Case I.—M. H., aged 64, who enjoys robust health, stout and with a florid complexion, was first seen on August 13th. She was then sallow and felt ill and exhausted. The throat was congested and painful, with a small patch of membrane on each tonsil. There was cough and difficulty in breathing. The temperature was 99.2°, the pulse 78. I ordered a mixture of perchloride of iron and chlorate of potassium and locally used salicylate of sodium.

August 14th. She had not slept much during the night. A dense membrane had covered the pharynx and fauces. The temperature at 10 A.M. was 104.2° F., at 4 P.M. 104.5°; the pulse 122. I had obtained a supply of Schering's antitoxin from Messrs. Allen & Hanburys and injected mxj. A lactic acid spray was used to the throat. She slept ten minutes after this was done and did not awake till 10.30 P.M., when her temperature was 102.8°; the pulse was 112. She had perspired very freely and now took food well; again slept until 5 A.M., took food and slept until 11 A.M. The temperature 102.3°, the pulse 100.

At 9 P.M. on August 15th the temperature was 103.2°, the pulse 126. Some fragments of membrane had been coughed up. The patient did not feel so well. Antitoxin mxvj was injected. She again slept soundly and perspired freely during the greater part of the night.

At 9 A.M. on August 16th her temper-

ature was 99.2° and at 4 P.M. 97.8°. The throat was clearing rapidly and her strength was, she declared, as good as it ever had been. Recovery went on rapidly. The urine was free from albumen.

CASE II.—D. G., aged 6 years, a delicate girl with mitral stenosis, was first seen on August 31st. The fauces and soft palate were inflamed and the tonsils and pharynx were covered with membrane. She complained of pain in swallowing. There was difficult breathing and stridor. The temperature was 104.8° F., the pulse 126 at 9 P.M., when I injected mxj of antitoxin. During the night she slept restlessly, but her breathing had become easier as the morning advanced.

September 1st. There was less stridor. The temperature was 102.4°, the pulse 114. She had taken food freely. The membrane on the palate was now curled under at its margins and had a shriveled appearance but a firm central attachment still. At 2 P.M. the temperature was 103.2°, the pulse 116. Antitoxin mxv was injected, after which she slept several hours, but was still restless.

On September 2d the temperature was 100.3° at 10 A.M., the pulse 84. Breathing was easier, stridor absent. The skin was acting freely. The membrane came away in large pieces during the day.

On September 3d the breathing again became difficult, stridor returned and the temperature rose to 102.5°. Antitoxin mxviij was injected. In ten hours the temperature had fallen to 98°, the pulse was 74. Membrane still continued to come away from the pharynx, naso-pharynx, etc., and the child continued to improve without further incident, except the presence in the urine of a small quantity of albumen.

Dr. D. Watkin Hughes (Wymondham) writes:

During the present severe epidemic of diphtheria at Barnham Broom, Norfolk, I have attended forty cases. I treated the first thirty with the usual remedies, namely, tinct. ferri sesquichl. and inhalations of sulphurous acid, iodine, carbolic acid, etc. With well-trained nurses, who most carefully attended to the patients, I lost ten out of the thirty.

For the last ten cases, some of which were very severe, I used Aronson's "Heilserum diphtheria antitoxin" (E. Schering) with marked success, injecting from mxij to xxij. The improvement was rapid and in most cases similar. On the second day after the injection the temperature rose to 103° or 104° F. On the third day it suddenly dropped to subnormal. The membrane shriveled up and peeled off in masses, leaving a raw surface, and from that time all these patients made rapid recoveries. In no case had I to repeat the injection.

The *British Medical Journal*, in the editorial notes, says:

To obtain the best results, experience already accumulated proves that the treatment must be adopted at an early stage of the disease; but at the present time, unfortunately, there is considerable difficulty in obtaining a sufficient supply of the serum. In France its preparation on a large scale has been undertaken by the Pasteur Institute, and it is hoped that in a couple of months' time the supply will be sufficient for the needs of France. The British Institute of Preventive Medicine expects shortly to be in a position to supply a considerable quantity. The treatment, however, is rapidly passing out of the experimental stage, and in the case of a disease so murderous as diphtheria, which produces annually so fearful a mortality, especially among children, the public may well look to the State to take steps to insure a constant and adequate supply of the remedy at a reasonable cost. Professor Behring, in an address before the German Naturalists' Society at Vienna, stated that in Germany and Austria alone the mortality from diphtheria might be estimated to be about 2,000,000 in every ten years. The serum treatment would reduce this high mortality, amounting to over fifty per cent. of the persons attacked, to ten per cent., and if employed in the early stage to five per cent. "In other words," he added, "about 1,500,000 lives may be saved every ten years, but of course the serum must be obtainable in large quantities. This is not now the case and will not be the case until the State takes the matter in hand and prepares it at the public cost." The mode in which the serum is obtained at the Pasteur Institute is as follows: The animals which are to furnish the antitoxic serum are rendered immune by the injection under certain precautions of the toxin of diphtheria. This toxin is formed when the virulent bacillus is grown in broth, and in practice

the rate at which it is produced is increased by drawing a current of air through the culture liquid. After three or four weeks the culture is sufficiently rich in toxin to be used. The animals employed are horses in good health and previously tested by the injection of mallein to prove that they are free from glanders. The culture, filtered through a porcelain filter, yields a clear liquid, with which the horse is inoculated by injection under the skin. Gradually, by repeated injections over a period of two or three months, the horse is brought into a condition in which its serum possesses very high antitoxic properties. The animal does not suffer in health at all, or only to a very slight degree. The efficacy of its serum having been ascertained by a test experiment on a guinea-pig, the animal is bled. It suffers little from this operation, and it is possible, if necessary, to bleed it again in two or three weeks, but it is advisable in the interval to strengthen its immunity by some further injections of the toxin. The animals used are cab horses, sound in constitution but broken down in limb, who after inoculation live a life of ease and luxury, varied by a periodical phlebotomy, such as our grandfathers submitted to voluntarily two or three times a year.

SOCIETY REPORTS.

PHILADELPHIA COUNTY MEDICAL SOCIETY.

Meeting of September 26, 1894.

PROPHYLAXIS IN CHURCHES NEEDED BY THE ADOPTION OF INDIVIDUAL COMMUNION CHALICES OR CUPS.

By Dr. Howard S. Anders. See page 493 of THE MEDICAL AND SURGICAL REPORTER for October 13, 1894.

DISCUSSION.

DR. LOUIS J. LAUTENBACH: I could report a case of syphilitic retinal hemorrhage in a priest, who claims to have contracted a sore in the mouth in the manner indicated by Dr. Anders. Another similar case, concerning the origin of which the history is more clear, has occurred in my practice.

DR. WILLIAM S. STEWART: In the Catholic Church I understand that the congregation do not drink the wine, but that they eat the wafer and the priest drinks the wine.

DR. JOHN C. DA COSTA: I can sympathize with Dr. Anders, and indorse much what he has said, but question whether his ideas are practicable. Let us take a few of the leading religious bodies. In the Roman Catholic Church, I am told that the priests alone partake of the wine; if so, there is no risk of contagion and no need of more than one cup. In the Presbyterian Church the people remain in their seats, and the four elders hand around the bread and wine. Now imagine 1,000 partaking—and a separate glass for each; let each glass occupy only two inches square space, and you would need a table of 28 square feet to hold the glasses alone; or, with a Baptist church in Louisville that I know of with a communion of 2,500, a table space of 69½ square feet would be needed.

In the Episcopal Church the people kneel at the chancel rail, and the bread and wine are handed to the people by the minister. Now imagine not 1,000, but 250 separate glasses, collecting them again, and at the end draining them and himself drinking what remains, for the rubric commands that "the minister and communicants shall, after the blessing, reverently eat and drink the same" (bread and wine). It would turn a solemn ceremony into a farce.

Next, as to the risk of contagion, take the diseases in the order the doctor mentions. A person with syphilis is scarcely the one you would find going to the communion. One with diphtheria would be too sick, as would also one with tonsillitis or typhoid. Pneumonia would scarcely

be conveyed. If the doctor thinks only of unfermented grape juice, there might be some risk, but with wine such as is ordinarily used, very little, for the alcohol in the wine is in itself a good germicide.

DR. THOMAS J. MAYS: I am in sympathy with some of the suggestions of Dr. Anders. I can well see why such diseases as typhoid and typhus fever, diphtheria, syphilis, etc., may be so transmitted, but I do not believe that phthisis can be communicated in this manner. At least, before the assertions of the reader can be established, he ought to show some relation between his conclusions and his premises—that those who partake of the communion cup are more liable to phthisis than those who do not. A great deal of loose thinking is being done on this subject. I do not see why, in addition to their natural affliction, this class of sufferers should be compelled to bear the cross of a new and artificial opprobrium. They have already suffered enough. I admit that facts to prove the correctness or falsity of the position of the reader of this paper are not easy to obtain, but as possible evidence that it is not correct, I would state that it is well to remember that phthisis is more prevalent among those of our Indians who have just come in contact with our frontier civilization than it is among those who have lived a more civilized life for many years in the interior of the States of Michigan, Wisconsin, and New York. The latter being under the influence of missionaries and the Church, and observing the rites of the same, they should be more liable to this disease than the former, if the communion cup produced any special havoc in this direction, provided, of course, that other conditions are alike. I hope that Dr. Anders holds statistics by which he can prove the accuracy of his contention in this respect.

DR. JOHN AULDE: I have long been convinced that the use of the common communion cup is productive of disease. Dr. Probst, Secretary of the Ohio State Board of Health, about two years ago delivered an address to a body of clergymen, calling their attention to the unsanitary features of this practice, and the investigation at Rochester, N. Y., seems to have established the danger of the cup. If the one disease, diphtheria, can be communicated in this way, it is enough to condemn the practice without further discussion.

Dr. Thomas J. Mays read a paper on

ICE-COLD APPLICATIONS IN ACUTE PNEUMONIA.

(See page 535.)

DISCUSSION.

DR. ALFRED STENGEL: I disagree entirely from Dr. Mays as regards the heart in pneumonia. I have seen a considerable deal of pneumonia clinically, but a great deal more pathologically. I have not made a post mortem in pneumonia in which I did not find some cardiac thrombosis. I have seen the thrombosis of such a character that it was difficult to imagine how any circulation could be carried on during the last moments of life. Of course, in some cases it is difficult to determine whether the thrombi are ante mortem or post mortem, but in most cases the manifestly ante-mortem character of the thrombi shows that the heart must have been seriously embarrassed. It is certainly the opinion of most authorities that the heart is seriously embarrassed, and post-mortem experiences would indicate the same thing.

DR. J. M. ANDERS: I was somewhat astonished to hear the reader of the paper take the position that the fever in pneumonia was in all probability the result of the localized inflammation. The localized inflammation may, to some extent, show the degree of infection, but its presence does not prove that this is not an infectious disease. I should incline to the view that the temperature is an indication of the severity of the type of infection, and not of the severity of the local inflammation.

I am always glad to hear a paper on the use of cold. Cold, whether locally or generally applied, can have but one effect in this disease, and that favorable. If applied locally, as suggested, it would undoubtedly mitigate to some extent the local inflammation, but it could not in an acute infectious disease control to any extent the course of the ailment. I do not believe that there is anything that will entirely control the course and symptoms of pneumonia, simply because it is an acute, infectious, self-limited disease. The local use of cold cannot meet all the indications in a case of pneumonia. It is well enough in a mild case, where the respiration is ordinarily good, the temperature only moderately high, and there are no nervous

symptoms, but in a severe case the cold or tepid bath meets many more indications and is more efficacious. One of the reasons for the bad respiration is the presence of pain, hence this should be gotten rid of early. The local application of cold does not influence the respiration of a patient suffering with pneumonia, in my experience; whereas the cool or tepid bath stimulates to deeper respiration and assists expectoration. Its effect on the nervous system cannot be over-estimated. I shall not go into the subject in detail. It is scarcely necessary; but it is bad practice, I think, to rely upon the local use of cold, which meets but a single indication, when we have at hand the cool or tepid bath, which meets so many and such as are of vastly more importance than the mere combating of local inflammation to the welfare of the patient.

Dr. B. F. Stahl: I am interested in the use of cold in the treatment of pneumonia, and especially so after considerable experience with application of baths in the treatment of typhoid during the past few months. I recognize that the general application of cold or cool water is productive of rest and of better respiration, and it has a general tranquilizing influence by its reduction and temperature. I am led to anticipate that its application in pneumonia will be advantageous. I freely admit, however, that I have had no direct experience in the use of local application of cold in pneumonia. I am ready to try it in any case where it may be applied generally or in the form of a bath, and I believe that we may expect decided advantages from its use.

Dr. Lawrence Wolff: I have had some experience with the use of cold in pneumonia. A couple of years ago I employed the cold bath in the treatment of pneumonia in my hospital cases, but the results were not as favorable as with other methods. I have used the local application of cold with more advantage. Dr. Da Costa taught many years ago that the ice poultice was one of the best applications, and relieved pain better and stimulated respiration perhaps better than any other application. It has been productive of great good in my hands.

Dr. John Aulde: My object in speaking is rather to make a suggestion to the reader of the paper in order to establish some physiological basis which may be of further value as indicating the effect which cold applications produce in pneumonia. The empirical deduction as to the value of ice in pneumonia seems to be fairly well founded, and would have been accepted ten or five years ago as very good evidence, but at the present time it seems to me that something more is demanded. It is hardly worth while nowadays to speak of "vital force," because we can go closer to life than that term would indicate.

The use of the cold bath in typhoid fever has been referred to and its virtues highly lauded. If the cold bath is useful in typhoid fever we should be able to make some observations which would give us some exact idea of the effect which it produces. It would surprise you if I were to prophesy that within two or three years some one would come before this society and advocate the use of massage in the treatment of pneumonia. It is only a few months since that a paper was published by Dr. Mitchell, of this city, referring to the wonderful effect of massage in anæmia, showing that it increased the number of red and white corpuscles.

In pneumonia we have rather a peculiar condition, different from that seen in typhoid fever. Dr. Osler has made some observations on the changes in the blood in this disease. He found that shortly after the leucocytes began to increase in number there was a defervescence, and a favorable change took place. If the number of leucocytes is large, that is, if a general leucocytosis takes place, he is able to say that the patient will recover, even if the temperature has not changed. In typhoid fever there is no leucocytosis, but it seems probable that in typhoid fever the cold bath is sufficient to produce an artificial leucocytosis. Consequently, if the cold bath is valuable in that disease it seems probable that it may produce the same effect in pneumonia, where there is a natural tendency to leucocytosis.

I would suggest that the blood be examined in cases where ice is applied. If it can be shown that the effect of cold is to increase the number of leucocytes, we shall have a definite basis on which to rest our conclusions.

The President, Dr. De Forest Willard: I would ask Dr. Aulde if Dr. Mitchell did not subsequently explain the increase in the number of corpuscles found, not by an actual increase in the

number of blood-disks, but by the fact that corpuscles lurking along the circumference of the vessels were brought into the current by the massage, just as the logs along the banks of a lumbering stream may be forced into the current?

DR. AULDE: Of course, we are not assuming that there is an increase in the number of corpuscles *de novo*. If those out of the current are brought into the stream by the contraction of the vessels, it is substantially the same thing. This brings out the leucocytes that are instrumental in maintaining the antiseptic condition of the blood, and with the contraction of the blood-vessels, produced by the cold, the red corpuscles carry oxygen to the tissues and take away carbonic acid and other waste products.

DR. MAYS: Dr. Aulde seems to lay great stress on the fact that leucocytes are present in pneumonia. Leucocytosis is present in many conditions, both normal and pathological. Every time you take a drink of beer, or eat a beefsteak, or take bitters, leucocytogenesis is increased. I do not think that the fact that the number of leucocytes is increased is of any great advantage in the successful treatment of pneumonia.

Dr. Stengel referred to the presence of thrombi in the pulmonary blood-vessels of pneumonia, and I think I must have read my paper to poor advantage if I have not succeeded in making plain my belief in the existence of this condition. Indeed, I invoke the high authority of Dr. Fox to show this. I think my intention has been misconceived by Dr. Stengel. The point that I tried to make clear was that this thrombosis leads many practitioners to try to whip up the heart to perform the impossible task of pumping blood through this thrombotic condition of the vessels in the lungs. They lose sight of the fact that the foundation of this thrombosis exists primarily in the lungs. They do not pay any attention to its removal in their treatment. The patient dies, and they believe that he dies because the heart has failed to perform its duty, while in truth death is caused by pulmonary failure.

I know that Dr. Anders has made use of cold, and I think that his results were rather favorable. He speaks of the fever as an indication of the extent of the infection. If by infection he means the amount of disease in the lung, I can hardly indorse the statement. I have in some of my cases seen high fever where there was small amount of infiltration. In one case particularly, seen three years ago, the amount of infiltration at the base of one lung was so slight as to be detected with difficulty, yet the patient had a temperature of 106° and 106.5°, and died in eight days. I did not apply ice in that case, for I did not then know its great value. I wish that I had, for I believe I would have saved the life of a dear friend. I infer from what Dr. Anders has said that he has not applied ice assiduously and persistently, for had he done so I think that he would not have said that he could not control the respiration in pneumonia by the application of cold. I expect in every case where ice is applied to have the temperature fall, the pulse fall, and the respirations fall. I do not think that the use of tepid or even cold baths is of service in pneumonia. The fever in pneumonia is different from that in typhoid fever. It does not yield to general cold as does the fever in typhoid. I think that if the prejudice against the application of ice would be removed, this treatment would be more thoroughly tried. I think that it will be found to be the most applicable and efficacious treatment for pneumonia. This has not only been my experience, but also that of others. It has been almost universally successful; in seventy-four cases there having been only two deaths. I do not say that this proportion will be maintained, but the treatment certainly has a great influence upon the local process in the lung. It circumscribes and aborts the exudation in the lung, and this is as much as can be expected from any measure.

Dr. Louis J. Lautenbach read an article entitled

MASSAGE VERSUS REMOVAL OF THE SOUND-CONDUCTING APPARATUS IN NON-SUPPURATIVE CASES OF DISEASE OF THE EAR.

(See page 538.)

DISCUSSION.

DR. L. J. HAMMOND: The experience of Dr. Lautenbach does not accord with that of Drs. Knapp and Dench, of New York, as given at the meeting in Washington. They seemed to think that the massage treatment did not give the results that

were expected from it. The experience of these and other gentlemen has been that where there is a marked retraction with great thickening, the results are not as good as those obtained by the ordinary methods with the Politzer bag and Siegle speculum. The cases that were at all benefited were the mild ones, that would have shown the same result by the routine treatment.

Dr. Lautenbach laid great stress upon the bones as a conducting medium. There have been a number of cases where the malleus and incus have been entirely destroyed with the membrane, and yet hearing was perfect. I recall three such cases. I think that the bones as a whole have very little to do with hearing, except the stapes. I think that the healing depends largely upon the condition of the footplate of the stapes over the oval window. If that be markedly bound down, I do not see how massage alone will be of great value. When added to the general routine treatment it may serve a good purpose.

Reference was made to permanent paralysis following operative treatment. I have done the operation many times, principally for suppurative conditions, and have had temporary paralysis only follow. All operations involving the tympanic attic have been followed by temporary paralysis, and the general opinion is that it is impossible to prevent it in these operations, owing to the close proximity of the facial nerve. It, however, invariably subsides without treatment in a few weeks.

Dr. E. Larue Vansant: I have had considerable experience with this massage, and in non-suppurative cases have been fairly well pleased with it. Certain cases, however, are not improved, and this may be explained by the pathological condition present. Where the adhesions are not great the case will improve. It may truly be said that they improve almost as well under the use of the catheter and Politzer bag. Where there are marked adhesions binding the drum-head down to the promontory, and probably adhesions between the ossicles, the massage treatment will not break these adhesions, and may not even stretch them. What it will do will be to puff out that part of the membrane not bound down by the adhesions. I have for some time made use of Delstanche masseur and with it used Siegle's speculum, and in this way I can easily see when by increased pressure certain parts of the membrane are made to bulge. Indeed, you can almost at once give a prognosis as to whether or not massage will do good.

In non-suppurative cases I think that it is not wise to recommend removal of the drum-head and ossicles for the permanent improvement of hearing. For the intense tinnitus or vertigo it may be recommended in certain cases. It is more preferable than massage for intense tinnitus with vertigo. Lately I have been treating these cases of non-suppurative otitis media with marked retraction by a combination method. I have first made an incision in the drum-head, and then, taking the little trowel-shaped knife used in removing the ossicles, have attempted to cut through some of the bands in the middle ear, particularly toward the promontory, and then followed this treatment by massage so as to prevent the re-formation of adhesions while healing is going on. I think that my results have been better than with either method alone.

Dr. George C. Stout: I think that massage and treatment of that kind should be instituted before any operation is recommended and that this is the general practice. Operation should be reserved for a last resort, and, so far as I can learn, this is the rule with all modern aurists.

The instruments which make a noise synchronous with the massage are as yet considered a doubtful improvement over noiseless massage.

Dr. Lautenbach: I am glad to learn that so many have used massage, but unfortunately most of the methods in use have been crude. I have used Siegle's speculum as a masseur for thirteen years; but this is not the method that I referred to in my paper. I refer to regular massage, with a definite amount of exhaust used, a definite number of times a minute, studying your case until you find the amount of motion that you desire, and regulating it accordingly. When Dr. Knapp and Dr. Dench referred to massage they could not have spoken of this method, as they knew not of its use. They have to-day no such instrument in their offices. I understand they both have the vibrometer and the vibrophone, but not this machine. The methods in use outside of the Siegle speculum and the Delstanche apparatus have been methods of phono-massage and not pneumo-mas-

sage. The phono-massage methods have their use not so much in the process of loosening up the sound-conducting apparatus as in stimulating that part of the nervous structures of the labyrinth lying close to the stapes. We are now learning that in plastic and catarrhal disease of the middle ear, the proximal endings of the auditory curve—those nearest the stapes—are affected often early in the disease. Often even when the hearing to the watch is quite good the patient has tinnitus. This indicates that the labyrinthine structures have been affected early. In those cases where there is loss of hearing without tinnitus, phono-massage will be of no service. The main advantage to be derived from phono-massage is in the dissipation of tinnitus. It cannot restore the lost hearing.

Speaking of the necessity of a sound-conducting apparatus, I think that it is a self-evident proposition that the sound-conducting apparatus so carefully constructed and mechanically so perfect would not be there if it were not needed. I do not think that it would have received so much attention from Helmholtz if it did not have its use. I admit that I have taken out the stirrup, and the patient could still hear; but I also know that the patient did not hear perfectly.

I do not mean to advocate massage separate from all other treatment of the ear. I do not think that any case of ear disease is to be treated by massage alone. In my paper I presumed that all other necessary treatment would be thoroughly carried out. One who tries to treat disease by one method without paying attention to the general as well as the local conditions present utterly fails to comprehend the science of medicine.

Speaking of severe cases, I might refer to a lady, aged thirty-four years, a school-teacher, who since early childhood has been deficient in hearing. For eleven or twelve years she has been constantly under treatment and constantly getting worse. Five or six weeks ago a physician advised her that an ossicle operation was the only thing to be done. Another physician expressed the same opinion. I saw her Monday two weeks ago, and since then she has been treated in the ordinary way and with powerful pneumo-massage to the ear. This morning she told me that she could hear her clock at two or three inches from the to-be-operated ear, a thing that she has not done for six years. In the ear the membrane is adherent to the promontory, but has been detached mechanically by the two weeks' treatment.

The massage method does separate the drum-head from the promontory, and it is only a question of time when the adhesions will be removed. The Delstanche masseur, while a good instrument in its way, is not the one that I should prefer in these cases. You cannot get with it the precision of motion and persistency that you desire. You cannot if necessary keep it up for one hour at a time. You want a method that will give you an easily regulated persistent movement of the ossicles and be able to use it as long as you desire, anywhere from five minutes to an hour or even more.

The Early Diagnosis of Phthisis.

In a paper read at the International Congress, M. Bernheim, of Paris, calls attention to the following points, which may be advantageously made use of in addition to the usual clinical symptoms of beginning pulmonary tuberculosis: "1. The examination of the secretions (urine, excess of phosphates and diminution of urea; blood, changes in configuration of the corpuscles; expectoration, presence [rare] of bacilli; urine ditto). 2. The inoculation of the patient's blood into an animal. 3. The examination of the lymphatic system (in many cases of commencing phthisis the glands are enlarged). 4. The constant hypertrophy of the spleen. 5. The improvement induced by the inoculation of these *débutants* in phthisis with immunized serum, the condition of other patients not being ameliorated by serotherapy. Of course, the association of several of the above signs is necessary before the diagnosis can be affirmed; but the early and constant enlargement of the spleen is a sign to which attention has not been called sufficiently, and on that ground I deem it worthy of mention to-day."—*Indian Medical Record.*

The Ruling Passion.

Doctor—A careful diagnosis of your case leaves no doubt that you have stone in the bladder.

Solomon Isaacstein—Doctor, do you tinks it vas a diamont?

CURRENT LITERATURE REVIEWED.

IN CHARGE OF ELLISON J. MORRIS, M.D., AND SAMUEL M. WILSON, M.D.

BUFFALO MEDICAL AND SURGICAL JOURNAL for October. Dr. Wm. C. Krauss discusses the

"Treatment of Neurasthenia."

He gives among the prominent symptoms of this disorder: Moroseness, fault finding, dull aching in the occiput or at the vertex, and in the lumbar spinal region. Following these come tachycardia and palpitation, sinking spells, hot flushes, profuse perspirations on the face and extremities, indigestion, short attacks of jaundice, scanty secretion of urine of high specific gravity, temporary sexual impotence. Great stress is laid on the appearance in all cases, with vasomotor symptoms, of a dilatation of one pupil with a contracture of its fellow. The author thinks this due to derangement of the sympathetic nerve.

For treatment the cases are subdivided into (1) those with a lithæmic element; (2) those without a lithæmic element; (3) those with marked vasomotor disturbance.

After trying to find and remove the cause of the disorder the asthenic cases of the first two divisions are ordered to take, before rising, two ounces of strong, black coffee, and in a half hour take a tepid sponge bath for about five minutes, then dress and take breakfast. The plethoric cases receive, instead of this, one-half ounce or one ounce of a saline cathartic followed by a cold bath, and if possible a cold plunge. Just before retiring a warm general bath is taken.

For from five to eight minutes a galvanic current is applied with the electrodes on the sacrum and the neck, then the positive pole is applied to the forehead and a weaker current turned on, and, finally, with the electrodes to the hands as strong a faradic current is applied as the patient can bear. This treatment is given once, twice, or thrice weekly; the severe cases receiving treatment three times weekly.

Massage may be given also, and the lithæmic cases receive after meals one to three tablets, each containing lithium carbonate, 3 grains; phosphate of iron, ⅓ grain; extract of nux vomica, 1-9 grain; arseniate of soda, 1-27 grain. The author claims that patients who seem unable to take iron in other forms use this tablet with benefit and that it acts well also in cases of chronic rheumatism.

Non-lithæmic cases are given bromides, hyoscyamus, tincture of nux vomica, albuminate of iron, phosphoric acid and pepsin. Trional in five or ten grain doses is the favorite hypnotic.

Cases with vasomotor disturbances have been intractable and unsatisfactory.

Dr. Frank J. Thornbury describes some

Interesting Dermatological Cases

seen in Kaposi's clinic.

A number of diseases rarely recognized elsewhere, if seen, are not uncommon; prurigo is one of these.

The first case reported was a man who developed pemphigus while under treatment for lichen ruber planus. There is said to be no similar case on record.

One or more cases of pemphigus may always be found in the wards. The treatment includes a water bath of from two to five hours daily, the treatment of Hebra for variola.

A disease more common in Austria-Hungary than elsewhere is rhinoscleroma. This commences on the mucous membrane near the ala nasi and slowly extends until the pharynx is involved. Cellular infiltration with increased vascularity takes place, and owing to increase of connective tissue the part becomes pale and hard and the function is interfered with.

Contraction of the nostrils and involvement of the larynx cause snoring and give the voice a harsh, nasal sound. A case may continue for ten or twenty years.

The bacillic cause of this disease has been isolated, but no known treatment is very effective.

A well marked case of ichthyosis hystrix was seen, in which the patient was so covered with horny spines as to resemble a porcupine.

Another peculiar case was one of psoriasis, in which the interpapillary hypertrophy had gone to such an extent as to cause homors varying in size from that of an almond to that of a walnut. These subsided promptly under doses of arsenic.

Kaposi's favorite local application is a ten per cent. solution of gallacetophenone, and this is painted every few days over the affected areas only.

Kaposi, the author says, treats all new cases of lupus and all newly affected areas of old cases by a thorough scraping with the sharp spoon; sometimes using cocaine, sometimes not. Some cauterizant, such as pyrogallol ointment, is then applied. Pick, of Prague, on the contrary, uses with uniform success an injection of about 1-130 grain of tuberculin. This results in a breaking down of the affected tissue and healing by granulation.

A translation by Mr. L. G. Sellstedt of an article by Dr. E. S. Perman on Stygiea describes a case of

Sarcoma of the Tongue Treated With Pyokotanin.

The growth involved more than half of the root of the tongue, was increasing in size, and caused considerable discomfort. Excision of the tongue was refused, so a preliminary tracheotomy was done, and subsequently injections of one to two grammes of a 1-500 solution of pyokotanin were made into the tissue near the growth.

After five injections the growth appeared

diminished, and later the pedunculated portion was excised by galvano-cautery, and the next day a small mass was found to have sprung up at one side and finally this also was excised.

The treatment during this time was continued, and up to the present time (the latter part of April) no return of the disease was apparent.

Other papers in this issue are "The Causes of Hernia With a New Theory," by Dr. Byron Robinson; "Hypertrophy of the Follicular Glands at the Base of the Tongue," by Dr. Horace Clark.

PERISCOPE.

IN CHARGE OF WM. E. PARKE, A.M., M.D.

MEDICINE

Veratrum Viride in Catarrhal Pneumonia in Children.

Dr. F. B. Sutliff, Sacramento, Cal., says, in a paper read before the Sacramento Society for Medical Improvement, after reviewing the treatment of prominent writers, that he thinks there is no remedy that is more of a specific for any disease than veratrum viride in catarrhal pneumonia in children. He does not believe veratrum viride has anything like the same influence on other forms of pneumonia, and thinks to this is probably due the fact that it has at times received such unlimited praise, and at others such condemnation.

The tincture is given in small (a fraction of a minim) and oft repeated doses until the pulse is reduced and respiration is lowered.

The following case is reported: Child two years old with breathing about sixty per minute; pulse very fast; cannot sleep nor rest on account of constant cough. Has been sick for one night only, but there were coarse rales over both lungs. He was getting blue and the case looked like a bad one. Ordered half-minim doses of tincture of veratrum viride combined with sweet spirits of niter and syrup yerba santa, the dose to be repeated hourly. In a few hours the good effect was manifest, in twelve hours the child was very much better, and the next day it had changed to an ordinary case and soon went on to convalescence.—*Denver Medical Times.*

Indicanuria as a Symptom of Latent Suppuration.

Indican, in small quantities, is a normal constituent of healthy urine, but under certain circumstances the amount is so large as to merit the designation of indicanuria. This condition is usually dependent on decomposition of the intestinal contents consequent on constipation; but it has recently been discovered in the urine in connection with the formation of pus in such quantities as to authorize the belief that its presence may afford an important indication of latent suppuration. The first thing, of course, is to eliminate the intestinal tract as the source of the indicanuria, and this is done by the administration of naphthol, bismuth, or other disinfectant. Should chemical analysis still reveal the persistence of the indicanuria, there is reason to suspect suppuration. In several cases observed by Dr. Keilmann, of Dorpat, the information thus obtained led to a successful search being made for foci of suppuration, the indicanuria subsiding as soon as the pus was evacuated. The analysis is simple enough to admit of its application by every one, which is more than can be affirmed of many of the tests proposed by laboratory physiologists. Equal quantities of urine and strong hydrochloric acid are shaken together in a test-tube, and a little chloroform is added. In the presence of indican this becomes blue from the indigo liberated by the decomposition of the indican, and falls to the bottom of the tube. A fair idea can thus be readily obtained of the amount of indican present, but for the purposes of diagnosis it is necessary to resort to a quantitative analysis. This does not involve much additional trouble, advantage being taken of the bleaching powers of hypochlorite of calcium, a standardized solution of this salt being dropped into the above mixture until complete decoloration results. Three or four drops of a five per cent. solution may suffice for this purpose, but in some cases as much as fifty, or even eighty, drops may be required.—*Medical Press and Circular.*

The Falkenstein Treatment of Pulmonary Tuberculosis.

We hear a good deal about the open-air treatment of pulmonary tuberculosis, and the attempts to raise this method into a "system," as practiced at Falkenstein, in the Taunus Mountains in Germany, are worthy of all praise, so far as they demonstrate to the world at large—which is not very believing in such matters—that tuberculous patients are all the better for open windows. At the establishments at Falkenstein, in addition to good food, cleanliness, perfect sanitation and most careful measures to prevent the diffusion of tuberculous dust, a definite attempt is made to enable the patients to pass their whole time in the open air. Plenty of rugs and clothing are allowed, and the rooms and corridors are plentifully supplied with heating apparatus; but, except when actually dressing or undressing, the windows of the bedrooms must be open day and night, in all weathers and in all seasons, and during the day the

patients dwell in the corridors or summer-houses or altogether out of doors. The results are said to be satisfactory. One point is of much interest. The number of patients whom it is necessary to confine to their rooms hardly varies in the different seasons, being 8.5 per cent. in the summer and 9.33 per cent. in the winter months. It seems clear, however, that a treatment of this sort, if useful at a health resort, should be equally applicable to home life, and that the lessons taught by it are as important to the healthy as to the sick. If these delicate poitrinaires can bear open windows and fresh air, so can people in ordinary health, and there can be no doubt that people would be better off in every way if they very much lessened the difference between indoors and outdoors as regards both clothing and fresh air. The lesson to be learned, however, from the Falkenstein treatment is that a certain acclimatization is required, and that what is begun must be persisted in. A man who sleeps with open windows one week and shuts them the next is sure to suffer from disorders of the air-passages.—*Medical News.*

Consumption at Different Ages.

The common impression based on the statements of many of the older text-books is that phthisis is especially a disease of early adult life. The statistics of death in Great Britain, probably the most complete and extensive anywhere attainable, however, indicate that this is not correct. The largest number of deaths, according to these statistics, occur in the decade from thirty-five to forty-five years of age, and that not until about sixty years of age do the number of deaths from this cause, as compared with the number of persons living, fall below the average for the period, from twenty to twenty-five. It is to be remembered, however, that the disease usually requires several years to run its course, so that infection probably occurs on the average nearly five years earlier than death.—*Phila. Polyclinic.*

The Action of Asparagus on the Kidney.

Three years ago Wilks sent a short communication to the *Lancet*, requesting the opinion of the profession on this subject. He therein stated that, in spite of books declaring asparagus to be a diuretic, he had observed that the very contrary was its action. Four letters came in reply, written by medical men. Three of them stated that from direct observation they had ascertained the inhibitory action of asparagus on the function of the kidneys, so that frequently only a third of the normal quantity of urine was secreted after eating this vegetable. The fourth gentleman said he had no knowledge of his own, but believed asparagus to be a diuretic, as he had always understood it to be so. The question of this vegetable's action in the economy is of little importance when it is so universally eaten and approved of, but it is one of interest in connection with the history of medicine as a science and art. In other sciences knowledge has grown from small beginnings, so that they have a solid foundation and superstructure; but the practice of medicine has existed from the remotest ages and was born of superstition. Consequently, a large part of our advance has been by getting rid of and overthrowing error. The writer has on his shelves a "Herbal," published about a hundred years ago, describing the value of a vast number of plants which are now discarded as useless; but that a positive error, and one the very reverse of the truth, as regards the action of a well-known vegetable should still be propagated in books is a most remarkable fact and, as regards the whole subject of therapeutics, a very sad one. —*Lancet.*

Fournier-Syphilis in Childhood.

Most physicians and all of the laity hold the erroneous idea that syphilis in the child is always hereditary and very seldom acquired. Two points must be understood: (1) Syphilis is never acquired during childbirth, because at birth the child is already syphilitic. (2) An acquired syphilis is never dependent upon syphilis of the mother which she acquired before the child's birth, for here, again, the child is born syphilitic, although it may be latent. The positive causes of contagion are thus reduced to—

1. Nursing, by which a previously syphilitic nurse infects when she develops patches in her mouth or papules upon the nipple, or by a nurse who is herself infected by nursing a second and syphilitic child.
2. During its growth; by its mother, subsequently affected; by its father, by its attendant, especially by kissing; by other persons with whom it comes in contact.
3. Criminal attempts.
4. Inoculation by physicians or midwives, either by the hands or by instruments.

Fournier concludes that children acquire syphilis more often than is supposed.—*New York Polyclinic.*

A HUMOROUS letter in the *American Practitioner and News* cast deserved ridicule upon the animal extracts so widely advertised in the daily press, and which, to the shame of the profession, have attached to them the name of a widely known physician. The writer of the letter details his experimental attempts to grow new parts upon mutilated dogs, using for the purpose extracts from the ears, tails, legs, noses, etc., of other dogs under the names of "earine," "tailine," "legine," "nosine," and the like. By an unfortunate mixing up of the extracts he grew legs and tails of entirely different breeds from the rest of the dog with most confounding and embarrassing results, and he warns future experimenters in this line to beware of his mistakes or they may find some day that they have caused the flat nose of a full-blooded negro to grow upon some blond young lady, who might cause them to be mulcted in enormous damages in consequence of so disastrous a blunder.

Typhoid Fever in Infancy.

Noyes (*Med. Rec.*) reports eight cases occurring in children from eleven months to three years of age, in a recent epidemic due to a contaminated milk supply. He thinks any long-continued fever, without obvious local inflammatory cause, suspicious, especially if joined with gastro-intestinal disorder; and the rose spots should be carefully looked for and the stools examined for characteristic bacilli. He urges the sterilization of all milk used for young children, and the disinfection of the stools in all cases of diarrheal nature. —*Polyclinic.*

SURGERY.

Internal Hemorrhoids.

Dundore (*Mathews's Medical Quarterly*), after an exhaustive paper on this subject, concludes as follows:

1. The ligature is the safest method of operating for internal hemorrhoids, as there is less likelihood of its use being followed by hemorrhage, stricture, or ulcers.

2. The clamp and cautery cause less pain, shorter convalescence, and are less likely to be followed by retention of urine than when the ligature is used; but hemorrhage and stricture of the rectum may very often follow their improper application.

3. The practice of Whitehead's method should be limited to those cases in which the entire circumference of the anus is involved. In ordinary cases of one or more hemorrhoids it should never be used, as it is liable to be followed by severe after-effects, and at best could produce no more radical result than the clamp and cautery or ligature.

4. Simple dilatation of the sphincter, injection of carbolic acid, and Manley's method are simple palliatives, and their use is very limited.

5. There is no single operation which is available in all cases. Experience alone should suggest the most efficient method of treating each individual case.—*Therapeutic Gazette.*

BACTERIOLOGY.

Oxalic Acid as a Germicide.

Potassium permanganate has long been reputed a reliable germicide in practical surgical work; and at the Johns Hopkins Hospital the routine preparation of the surgeons' hands was, after thorough washing, to have them immersed in a solution of permanganate until stained a deep red-brown. To remove the stain, they were then placed in a warm saturated solution of oxalic acid. Repeated bacteriological tests have shown that this method was very effective.

A series of experiments by Dr. Mary Sherwood (*Johns Hopkins Hospital Reports*) to test the relative germicidal powers of the two solutions, however, seems to indicate that the real germicide was the solution of oxalic acid. Using bits of surgeon's silk, dipped in cultures of *staphylococcus pyogenes*, it was found that potassium permanganate in saturated solutions did not sterilize them, either at the room temperature or at a temperature of 45° C., by exposure of from one to ten minutes. On the other hand, oxalic acid in saturated solution, at a temperature of 40° C. to 45° C., sterilized the infected threads exposed to its action for one minute, showing the oxalic acid to be the more powerful germicide.—*Polyclinic.*

OPHTHALMOLOGY.

Injury to the Eyes from a Heavy Charge of Electricity.

Rivers (*Archives of Ophthalmology*) reports the case of a man, aged 25, who received an electrical force amounting to 550 volts; the discharge of the electrical force issued from a wrench, which was on a level with his face, a loud report occurred and an intense flash of light. The patient was knocked down; vision was immediately affected; the eyelashes and eyebrows were nearly burned off, the ocular conjunctiva had the appearance as if it had been painted with a strong solution of nitrate of silver, the cornea in each eye was of the appearance of ground glass, the opaqueness being greatest at the center, vision equal to perception of light. Eleven days later there was no corneal opacity, and the vision of the right eye equaled 20–CC, and the left 20–XL. The ophthalmoscope showed the media perfectly clear, the optic discs and retinal vessels looked normal. Vision gradually improved to $\frac{20}{20}$, although photophobia was marked, and he has to wear smoked glasses when out of doors.—*Medico-Surg. Magazine.*

PATHOLOGY.

A Nomenclature for the Different Classes of Infectious Diseases.

The following classification of infectious diseases was submitted by Dr. Thomson for the consideration of the New York Academy of Medicine at its meeting held May 3, 1894, with the hope that it would serve to invite discussion on a subject of great public importance, namely, the adoption by the profession of a definite nomenclature descriptive of the various classes of infectious diseases.

1. All infectious diseases are due to the presence of their specific living micro-organisms in the body.

2. Infectious diseases are divisible into three classes, (1) the communicable, (2) the non-communicable, and (3) the septic.

3. The communicable diseases are those whose origin is from an animal body. Examples are small-pox, Asiatic cholera and tuberculosis.

4. The non-communicable infectious diseases are those whose origin is not from an animal body, but from a place or thing, examples of which are ague, yellow fever and miasmatic diseases in general.

5. The communicable diseases are divisible

into two classes, according to the ordinary modes of their communication, (1) into the contagious and (2) into the non-contagious communicable diseases. The contagious communicable diseases are those in which simple proximity to the infected with them is sufficient to communicate the infection to those susceptible to them, examples of which are typhus fever, scarlet fever, small-pox, measles, diphtheria, mumps, whooping-cough, etc. Isolation of the sick with them, therefore, is needful to prevent infection.

The non-contagious communicable diseases are those in which the communication is not by simple proximity to the sick, but through intermediate means of communication. Isolation of the sick with them, therefore, is neither needful nor effective, in comparison with measures directed against the intermediate means of the infection. Examples of these diseases are typhoid fever, Asiatic cholera and tuberculosis.

6. The septic infectious diseases are those in which the infection has gained entrance through a wound, or damage, by inflammation or otherwise, of the skin or of a mucous membrane. Examples of these are surgical infection of wounds, erysipelas, hydrophobia, tetanus, etc.

Lastly, all infectious diseases can be prevented by measures of disinfection applicable to each.—*Medical Record.*

ARMY AND NAVY.

CHANGES IN THE U. S. ARMY FROM OCTOBER 7, 1894, TO OCTOBER 13, 1894.

Upon abandonment of Mount Vernon Barracks, Alabama, Major Curtis E. Munn, Surgeon, is ordered to Benicia Barracks, California, relieving Captain Ogden Rafferty, Assistant Surgeon.

Captain Rafferty, on being relieved by Major Munn, is ordered to Presidio of San Francisco, California, for duty.

First Lieutenant Charles E. B. Flagg, Assistant Surgeon, relieved from duty at Presidio of San Francisco, California, and ordered to Angel Island, Cal., for duty.

Major Van Buren Hubbard, Surgeon, relieved from duty at Fort Spokane, Washington, and ordered to Fort McPherson, Georgia, for duty at that station.

Upon arrival of Major Joseph K. Corson, Surgeon, at Fort D. A. Russell, Wyoming, First Lieutenant George D. DeShon, Assistant Surgeon, will be relieved and ordered to Fort Logan, Colorado, for duty.

Upon abandonment of Fort Sully, South Dakota, Captain Alfred E. Bradley, Assistant Surgeon, is ordered to Fort Keogh, Montana, for duty.

Upon abandonment of Fort McKinney, Wyoming, First Lieutenant Henry A. Shaw, Assistant Surgeon, is ordered to Fort Niobrara, Nebraska, for duty.

Upon abandonment of Fort Bowie, Arizona, Captain Jefferson D. Poindexter, Assistant Surgeon, is ordered to Fort Riley, Kansas, for duty.

Upon abandonment of Fort Marcy, New Mexico, Major James F. Kimball, Surgeon, is ordered to Fort Wingate, New Mexico, for duty.

Upon arrival of Major Kimball at Fort Wingate, Captain C. N. B. Macauley, Assistant Surgeon, will take station at Fort Apache, Arizona, for duty, relieving Lieutenant M. W. Ireland, Assistant Surgeon.

Lieutenant Ireland, on thus being relieved, will take station at Fort Stanton, New Mexico, relieving First Lieutenant F. R. Keefer, Assistant Surgeon.

Lieutenant Keefer, on being relieved, will proceed to and take station at Washington Barracks, District of Columbia.

Upon abandonment of Fort Supply, Oklahoma Territory, Major Curtis E. Price, Surgeon, will proceed to and take station at Fort Sill, Oklahoma Territory.

First Lieutenant Isaac P. Ware, Assistant Surgeon, is relieved from duty at Fort Supply, Oklahoma Territory, and ordered to Camp Eagle Pass, Texas, for duty.

Upon arrival of Lieutenant Ware at Camp Eagle Pass, First Lieutenant Alexander N. Stark, Assistant Surgeon, will return to his proper station at Fort Sam Houston, Texas.

Upon abandonment of Fort Mackinac, Michigan, Captain E. F. Gardner, Assistant Surgeon, is ordered to Boston, Mass., for duty as attending surgeon and examiner of recruits, relieving Major M. W. Wood, Surgeon, who, on being thus relieved, will proceed to take station at Boise Barracks, Idaho, to relieve Captain William Stephenson, Assistant Surgeon.

Captain Stephenson, Assistant Surgeon, on being relieved, will proceed to and take station at Vancouver Barracks, Washington.

By direction of the Secretary of War, leave of absence for twenty-five days, to take effect upon his relief from duty in Boston, Mass., is granted Major Marshall W. Wood, Surgeon.

By direction of the Secretary of War, Captain Francis J. Ives, Assistant Surgeon, having proceeded with troops to Fort Ethan Allen, Vermont, is relieved from further duty at Fort Sheridan, Illinois, and will remain on duty at Fort Ethan Allen until the arrival thereat of Captain Aaron H. Appel, Assistant Surgeon, when he will report in person to the commanding officer Plattsburgh Barracks, New York, under the requirements of par. 10, S. O. 24, A. G. O., September 20, 1894.

By direction of the Acting Secretary of War, Captain George E. Bushnell, Assistant Surgeon, will be relieved from duty at David's Island, New York, by the commanding officer of that post on the receipt by him of this order, and will then report in person to the commanding officer Fort Hamilton, New York, for duty at that post, reporting by letter to the commanding general Department of the East.

By direction of the Acting Secretary of War, the extension of leave of absence granted Captain C. N. B. Macauley, Assistant Surgeon, in S. O. 55, Department of the Colorado, September 14, 1894, is further extended one month.

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ORIGINAL ARTICLES.

OCULAR HEADACHE.

ANNA C. HANDS, M.D., Boston, Mass.

Ocular headache may be defined as pain or distress in the cranium and face, which is the reflex expression of some abnormality in the visual organs or in the performance of their function. Oculists had long been familiar with the fact that disorders of the refractive apparatus of the eye would occasion cerebral discomfort and pain, but it had not occurred to physicians to look for eye defects to explain headaches whose origin was obscure, until S. Weir Mitchell brought the subject prominently forward in The Medical and Surgical Reporter, August, 1874, and later in the *Amer. Jour. of the Med. Sci.*, April, 1876.

The points made by him were:

1. That many headaches are caused indirectly by defects of refraction or accommodation.

2. That in these instances the brain symptom is often the only prominent indication of the eye trouble, so that there may be no ocular pain, but the eye strain is expressed solely by frontal or occipital headache.

3. That long-standing eye troubles may be the unsuspected cause of nausea, vertigo and insomnia.

4. That in many cases the eye trouble becomes suddenly injurious, owing to a breakdown in the general health or to increased sensitiveness of the brain from mental or moral causes.

The knowledge is now so universally accepted that the writers upon the subject are legion.

Bickerton found headache a distinct symptom in 277 cases out of 1,000 in which refractive errors existed.

Ranney describes cases of sick headache relieved by correction of eye strain, and says: "I have yet to meet a case of typical migraine in which a marked error of refraction or a serious muscular anomaly in the orbit did not exist." He also concludes that there is a relationship between anomalies of visual apparatus and the neuropathic tendency; proving by records that eye defects are found in a large proportion of these subjects, many of them congenital and inherited. That chorea, epilepsy and insanity even have been cured by remedying ametropia and muscular deficiencies is abundantly substantiated by many good authorities.

Charcot finds ophthalmic migraine divisible into two classes:

1. Simple, manifested by headache and visual disturbances; and

2. Concomitant, with aphasic, sensory and motor disturbances in addition.

Stevens has arrived at the following conclusion: "Difficulties attending the functions of accommodation and of adjusting the eyes in the act of vision, or irritations arising from nerves involved in these processes, are among the most prolific sources of nervous disturbances, and more frequently than any other condi-

tion they constitute a neuropathic tendency."

The study of the nervous supply of the eye and of its intimate connection with that of surrounding structures makes the phenomena of reflex headache seem very reasonable, when we remember that an irritation set up in any nerve gives rise to the greatest variety of disturbances in any or all the other parts of the organism. Six of the twelve pairs of cranial nerves send branches to the organ, and the second, third, fourth and sixth are distributed to it exclusively, and there is a still further supply by twigs from the cervical and cerebral sympathetic nerves. The retina and optic nerves originate as buds from the anterior cerebral vesicle, and retain respectively the structure of a ganglion and of a cerebral commissure. There is an exceedingly intimate connection between the blood and lymph circulations of the eye and of the cerebrum; therefore it is not to be wondered at that the visual organs frequently become delicate exponents of intra-cranial changes.

In accordance with these facts, it may be stated as an axiom that it is imperative in all cases of cerebral disease to examine the interior of the eye with an ophthalmoscope, even if the patient declares his sight perfect and that he can read small type readily. It is in this examination alone that we can see a living nerve and observe the vascular and nervous changes going on, which are a picture in miniature of the condition of the brain itself. In the emmetropic eye, distant vision is accomplished without any effort of the ciliary muscle; but in the hypermetropic eye the accommodation must be brought into use to bring even the parallel rays to a focus on the retina, and of course for all near work a much greater effort is required.

It is thus a fact that the hypermetropic eye is never in a state of rest while exercising the function of vision, as is the emmetropic eye when viewing distant objects.

In the myopic eye no distinct image can be had on the retina unless the object is brought nearer than infinity (which for optical purposes is represented by 20 feet). The parallel rays form circles of diffusion on the retina if distant vision is attempted.

In presbyopia, accommodation is rendered exceedingly and increasingly difficult by the crystalline lens losing its elasticity.

The excessive and continued strain upon the muscles of accommodation is a fertile source of exhaustion and irritation.

Hypermetropia and astigmatism, alone or combined, requiring the greatest strain, are more often the cause of reflex disturbance than is myopia.

A pair of normal eyes accommodated for a given distance will converge for the same distance and thus produce a single clear image.

If the eye be hyperopic, a greater nervous impulse and more active muscular contraction must occur in accommodation than in the normal eye.

For instance, if a hypermetropic eye is accommodated for one meter distance, it may require twice the energy necessary in a normal eye. Then if the effort at convergence is equal to that of accommodation, and the eye is focussed for one meter distance, the axes of the eyes will meet at a much nearer point; the eyes are not adjusted in their axes to the point for which they are focussed, and confusion results. It is to this great nervous perplexity more than to the muscular effort that the consequent exhaustion and irritation must be attributed.

The principle may be illustrated by a young person who attempts to use a pair of strongly magnifying glasses and finds, if continued for any length of time, the result to be vertigo, nausea and vomiting. That this result does not occur if only one eye be used, proves that the disturbance is due to the effort at perfect binocular vision.

A difficult and more complicated perplexity arises in cases of astigmatism, and still other nervous confusion is the result of myopia.

The symptoms arising from eye strain are many and varied.

The pain may be paroxysmal in character, or continual and subject to exacerbations, which are frequently brought about by worry, excitement, overwork, or any cause tending to lower the vitality. The most usual seat of pain is in the temples, supra-orbital and occipital regions, more rarely at the vertex. It may extend down the cervical region to the scapulæ. Gastric symptoms are frequent concomitants, and deceive the patient as to the origin of the suffering. There is present in a large proportion of cases a general nervous irritability, and even a fear of impending insanity. In all forms of ocular headach

there will be found asthenopia, nausea and vertigo in varying degrees. Where insufficiency of the internal recti muscles exists, sensory disturbances are frequent in the occiput, nucha, shoulders and back. Where insufficiency of the other recti is prominent, vertigo, diplopia and confusion are marked symptoms. In hyperopia and hyperopic astigmatism, the frontal headache is of most frequent occurrence. In myopia and mixed astigmatism, frontal, temporal and general headaches are about equally common. In cases combining hyperopia or myopia with presbyopia, frontal, temporal and occipital pain with vertigo are the phenomena observed. In pure myopia and presbyopia, nervous symptoms are seldom present.

The diagnosis of the etiological factor of headache is one of the most difficult problems a physician is called upon to solve. The number of different conditions upon which it may depend is legion.

Each case of headache (except, of course, those depending upon an evident febrile state) should be carefully and systematically studied. The habits, occupation, diet, and every detail as to mode of life should be ascertained. The family history should be inquired into, the urine carefully and repeatedly examined, and the state of the heart, blood, and especially of the eyes ascertained. In obscure cases, all possible sources of peripheral irritation should be considered, and malingering should not be forgotten. Some cases require the coöperative skill of several specialists (neurologist, gynæcologist and ophthalmologist) in order to investigate every clew in a thoroughly scientific manner.

The eyes should be examined as to the efficiency and balance of the muscles.

The test of refraction can only be accurately made, especially in a child, by the use of atropine to paralyze the accommodation.

A distinction must be made between a true ocular cephalalgia, in which the eyes are at fault, and the neuro-ocular cephalalgia, which is really due to an abnormal systemic condition (as neurasthenia, hysteria, or anæmia) in which the symptoms are called out by the use of the eyes.

The prognosis of headache dependent upon eye troubles is very favorable.

Stevens has treated 1,280 cases of chronic headache, and reports that permanent relief followed the correction of the ocular difficulties in 83 per cent. of the cases, improvement followed in 12 per cent., and failure in 4 per cent.

He also says of these cases that they were all typical cases of chronic headache, no cases of simple asthenopia or temporary headache being included.

He further remarks that in these cases no drugs were administered, so that nothing could be ascribed to the influence of medication, and that the results must be attributed solely to the removal of difficulties incident to the performance of the visual act.

It is to be observed also that the relief was not due to temporary stimulation of the nervous energy, as might result from electricity, drugs or a change of air or surroundings.

Norton reports a number of cases in which prompt improvement and relief of asthenopia and headache followed the correction of as low degrees of astigmatism as 25 D.

The essential element of the treatment is, of course, to remove the cause.

Correct refractive errors by proper lenses accurately adjusted.

The remedies for insufficiency of the recti muscles are:

1. Ocular gymnastics. This is accomplished by the use of prisms, and is soon followed by increased tone in the muscle treated.

2. Tenotomies and advancements of the muscles.

The use of eserine in cases of deficient accommodative energy is often of great temporary benefit. The instillation of atropine where the tension of accommodation is very great is often followed by immediate relief, and may, by removing a chronic condition of tension, give even permanent relief in some cases.

An important portion of the treatment is prophylaxis.

Children should have their eyes carefully examined before entering school. It seems a fitting subject for the State to consider the amount of suffering that might be saved and the increased capabilities that might be secured to its citizens as well as to those who are yet taxed without representation.

Outdoor exercise is of great benefit. Dr. Mittendorf says that many of his patients would be perfectly free from headache and able to lay aside their glasses could they

devote much time to outdoor muscular exercise, but if obliged to keep close in school, found glasses necessary.

He also refers to the fact that many people go through life hypermetropic and astigmatic without inconvenience, unless their health becomes impaired from some cause when asthenopia is manifested at once.

As a palliative measure a lotion composed of lavender, rosemary, camphor and alcohol is recommended as a local application to the closed lids and forehead.

The physician should never be persuaded to administer an opiate for a headache unless it be due to some incurable condition, as uræmia or organic cerebral disease. Hundreds of persons are rendered morphiomaniacs by the thoughtless administration of the drug for headaches.

LIST OF WORKS CONSULTED.

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Century Dictionary.
Da Costa—*Medical Diagnosis.*
Dana—*Text-Book of Nervous Diseases.*
Edmonds—*Diseases of Children.*
Flint—*Practice of Medicine.*
Foster—*Encyclopædic Medical Dictionary.*
Gray—*Anatomy.*
Hammond—*Diseases of Nervous System.*
Hare—*System of Practical Therapeutics.*
Hart—*Diseases of Nervous System.*
Hartridge—*The Refraction of the Eye.*
Hayes—*Diseases of the Nervous System.*
Keating—*Encyclopædia of Diseases of Children.*
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Putzel—*Functional Nervous Diseases.*
Sajous—*Annual of Universal Medical Science,* 1888.
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De Schweinitz—*Diseases of the Eye.*
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AMPUTATION OF THIGH—FRACTURE OF HUMERUS—SARCOMA OF CHEST—TUBERCULAR LYMPH-NODES.

ROSWELL PARK, A.M., M.D.,* Buffalo, N.Y.

A week ago you saw an amputation of the thigh performed on this young woman to remove an enormous ulcerating malignant tumor. The dressing has not yet been changed, and I purpose doing so in your presence. After the patient was relieved of the constant poisoning from the horribly offensive mass, she improved rapidly, began to eat better and in every way justified the conclusion as to the necessity of operation. Her temperature has not reached 100° since the operation and has been practically normal since the second day thereafter. The stump was dressed without drainage and tourniquet was not removed till after the dressing was applied. You notice how little hemorrhage there has been. The outer layer of cotton is clean; only the iodoform gauze immediately over the skin has been moistened with blood. The healing is practically complete, although there is a narrow raw line where the flaps have not come entirely together. You will remember that the wound was sewed up rather loosely. The constant tremor of the stump is merely an indication of muscular weakness and is almost always observed. We will spray the stump with hydrogen peroxide solution and then smear it with sterilized petrolatum to prevent the dressings from sticking. The petrolatum is warm, having been recently sterilized. Iodoform is dusted over the stump and the dressing of iodoform gauze, bichloride gauze and cotton is applied.

If any vindication of modern surgical methods were necessary, this case affords it. Formerly, we used drainage in every case; now, acting on the belief that everything is sterilized at the time of the operation, we demonstrate our faith by making no provision for the escape of infectious material.

At the operation I told you that the woman gave no history as to the duration of the tumor. Since then she has told me that her foot was more or less sore for ten years; just how long a duration we may ascribe to the tumor, which was an osteosarcoma, it is impossible to say. The woman has suffered a sort of martyrdom to ignorance and poverty, though the lat-

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ter need not have delayed the time of her relief.

When I was house surgeon we had to dress such a stump as this morning and night. The patients were subjected to more or less pain and discomfort by the frequent dressings. The carbolized oil which was used did not insure surgical cleanliness or even freedom from odor, and even the increased expense of dressings was a matter of importance. After three or four weeks we expected the patient to recover. If this woman had anybody to look after her at home she could leave the hospital to-day, leave the dressing on for a couple of weeks, then discard it, putting on, perhaps, a simple compressive bandage which the instrument makers like to have used for some time before fitting an artificial limb.

FRACTURE OF THE HUMERUS.

This man presents an acute condition of the left arm and an old one of the right shoulder. Let us investigate this latter first, as it will not subject the patient to so much discomfort. You will notice a flatness of the outer aspect of the shoulder, indicating an almost complete atrophy of the deltoid. The arm is moved freely and the patient says he can lift it away from the body, but you will note that he does not do so except by moving the scapula also.

The patient sustained a dislocation of the shoulder which was not touched for several days. Then he entered the hospital and Dr. Parmenter reduced the dislocation, but found that the head of the bone would not remain in place, indicating that there was an extensive laceration of the capsule. Accordingly, Dr. Parmenter cut in along the outer border of the arm and put the head of the bone into place, sewing the capsule around it. The atrophy of the deltoid could not be due to the operation, for although the scar indicates that the muscle was divided longitudinally, the circumflex nerve which supplies the deltoid could not have received any important injury from the division of a few of its minute branches. The nerve lesion and consequent atrophy of the muscle must have been due to the bruising of the circumflex nerve trunk by the inward displacement of the head of the humerus.

Yesterday the patient fell down cellar, about six feet and a half, and sustained a severe injury to the other arm. In this instance we lose a very valuable surgical guide, the comparison of the injured with the normal limb. For example, the left shoulder in contrast with the atrophied right shoulder appears enormously swollen. In reality it is only moderately so. The left forearm is freely movable, but not the arm. Thus the aids to diagnosis are somewhat restricted. The line of the axis of the humerus seems to point to the coracoid process, and this might suggest a subcoracoid dislocation. At the place where the head of the bone would be found in this dislocation there is a visible swelling, and when I press deeply over it, it yields hard tissue as bone would. Moreover, when I rotate the arm with my hand on the swelling, there is no moving body there. Indeed, with a dislocation, we should find preternatural immobility, whereas here I find preternatural mobility at a point below the deltoid. Pressure at this point causes pain, as it would not do if there were merely a dislocation. I can still feel a globular, hard body in the normal position of the head of the humerus. On pressing firmly over this body it remains motionless while I rotate the arm and I get a distinct crepitus at the line of preternatural mobility. We will now try Dugas' test, which depends upon the possibility of having the nearly straight line of the humerus tangent to the cenoidal thorax at more than one point. The hand of the injured arm is placed on the opposite shoulder. Now, if the head of the humerus be in its normal position away from the ribs, the elbow will touch the chest, whereas if the head is dislocated so as to lie nearly against the thorax, the elbow will stand out from the body. An attempt to execute this test causes so much pain that I will not persist in it, more especially as the movement has caused a marked bending at the point where crepitus was elicited.

After two or three days the ecchymosis, which is not now conspicuous, will be very apparent.

The forearm is held flexed against the chest, and a rubber adhesive strip is applied along the posterior and the anterior surfaces of the arm, leaving a long loop at the elbow. A narrow strip is wound spirally around the arm so as to hold the first in place. Over this a roller bandage

is applied and carried down in a few spiral turns below the elbow. We will attach a pulley to the side of his bed, and connect a weight with the loop so as to extend the arm. Probably from five to eight pounds will be necessary, enough, at any rate, to rectify the position of the limb in half a day by tiring the muscles into relaxation. After five or six days the patient will be able to get up, and, if the bone is then in good position, we will put on a Hamilton splint or bind the arm to the body, and let him walk around carrying a weight at the elbow.

SARCOMA OF THE CHEST.

The next patient is a man of forty with an enormous semi-solid tumor firmly attached to the thorax, which, he says, has been growing nearly seventeen years, and he has at length made up his mind to have it removed. His deliberation reminds one of the man who was confined in a little village jail for a number of years and then was struck with the happy thought to open the window and jump out.

From the patient's statement that the tumor originated in a small movable nodule, I believe that the growth was extrathoracic, but as it has gradually increased, it has became adherent to the bony structures and has doubtless involved the thoracic wall to some extent. I hope it has not also grown inwardly from the ribs, and in this hope I am encouraged by the circumscribed area affected. The tumor occupies the position of a left breast; it is hard and almost spherical, feeling like a croquet ball imbedded in the flesh.

On making the first incision, the knife plunges unexpectedly into a cystic pocket from which a quantity of dark, grumous material exudes. Perhaps you noticed that the ether caused a marked cyanosis. This has been relieved by the flow of venous blood from the wound. At the same time the signs of returning consciousness compel the administration of more ether.

I judge that the contents of the tumor are sarcomatous, broken down in places. A chisel will be necessary to separate the bone. In the lower part of the tumor the growth is osteo sarcomatous. The base of the tumor is so infiltrated with sarcomatous elements that it is impossible to effect a complete removal. The wound is closed with silkworm-gut sutures.

TUBERCULAR LYMPH-NODES.

This child presents an enormous enlargement of the cervical lymph-nodes and of the tonsils, which are of the same essential constitution. The latter are so swollen that it is difficult for him to swallow.

The mother also says that there are other enlargements apparent and that her physician has discovered like enlargements internally. In the left axilla I find the nodes enlarged, but not in the right. There is none discoverable in the groin. The mother's statement that there were enlarged lymphatics all over made me think of Hodgekin's disease or malignant lymphoma, which is a better term. In this disease the lymphatic enlargements are extensive, the spleen is enlarged, there is a decrease of red blood corpuscles and a relative but not actual increase of whites. Thus the diagnosis may depend largely on the microscopical examination of the blood. I am inclined to think, however, that the lesion is tubercular. If the case proves to be one of Hodgekin's disease I shall give Fowler's solution, increasing gradually to the point of tolerance, giving perhaps twenty-five drops a day, preferably in one dose hypodermatically. If the case is tubercular this treatment will be of value only as a general tonic. The removal of so many masses, even on the cadaver, would require two hours or more. In the living child such an operation is altogether too formidable. If the masses are tubercular we will give guaiacol internally and inject zinc chloride solutions into the nodes, hoping to get a bactericidal action or, at least, a condensing inflammation.

The case well illustrates the fallibility of snap diagnoses; that of malignant lymphoma would depend on entirely false premises, *i.e.*, the statements of the mother as to the widespread traces of disease.

Intra-Venous Saline Injections in Uremic Coma.

Dr. C. T. Parker (*Medical Record*) reports that at the Chambers Street Hospital, New York, this method of treatment is used in all subjects of uremic coma, and found to answer better than any other. If the patient is plethoric, it is supplemented by the taking of blood from the other arm. The injection is made into one of the veins at the bend of the elbow, one or two quarts of the saline being used.

COMMUNICATIONS.

FRACTURE OF THE LOWER END OF THE RADIUS.*

P. S. CONNER, M.D., CINCINNATI, OHIO.

As ordinarily met with, fracture of the lower end of the radius is the result of "cross-breaking strain" consequent upon over-exertion of the hand upon the forearm. Force received upon the palm, carried up through the os magnum and the projecting line of junction of the scaphoid and semi-lunar, if sufficient to break the radius must do so in a more or less longitudinal direction, not transversely. Overbending of the forearm bones may, and at times does, cause fracture of the radius which is approximately transverse; but the level of the break is always higher than that of the common "wrist fractures."

Experimentally, by over-extension, every variety of the fracture under consideration can be produced, from the simple crack through the articulating extremity to a separation and displacement of the carpal fragment equal to that of the most severe injury coming under professional care. Whatever its degree, displacement is due to the secondary action of the anterior radio-carpal ligament upon the fragment already dragged off from the radius; and it is in the majority of cases largely maintained by the binding force of an untorn dorsal strip of periosteum, as originally shown by Pilcher. Much has been written, and more said, respecting impaction of the dorsal compact edge of the lower end of the upper fragment in the cancellous upper surface of the lower fragment; and proof of its existence has been found in inability to properly adjust the fragments by traction upon the hand in the direction of the long axis of the forearm. But, unless it may be under very unusual conditions, a force sufficient to pin the upper fragment in the lower would be sufficient to and would split the lower fragment into two or more pieces and consequently prevent impaction. The resistance to replacement by direct extension is, in the great majority of cases, probably in all, not in any fixation of the upper in the lower fragment, but in the untorn periosteal band already mentioned, Only when such band is absent because of complete laceration at the time of injury, or it has been torn by the dragging force exerted through the hand, can proper apposition be secured by such manipulation. But if instead of pulling upon the hand it be over-extended, brought, in other words, in the position in which the fracture occurred, any existing periosteal band is at once relaxed; and the moderate pressure upon the upper end of the lower fragment is sufficient to carry this fragment into its proper place, at times with a very audible snap. Little or no pain is produced; no anesthetic is required; the securing of proper apposition of the fragments is the work of but a few seconds. Personally I have never had any difficulty in thus adjusting a case coming under care within twenty-four hours after receipt of the injury. If there is, as there certainly is at times, a fixation of the ulnar styloid process under or in the posterior annular ligament, such process will be set free either by simple over-extension or by such combined with rotation. Once properly apposed, there is practically nothing other than outside violence to produce a secondary displacement. The weight of the dropped hand strongly tends to maintain apposition, and additional security is afforded through the action of the tendons crossing over the line of break on the palmar and dorsal surface. The supinator longus through its styloid attachment does without doubt act upon the lower fragment, but such action is too feeble to cause displacement.

Proper adjustment (and the earlier it is effected the better) will prevent or greatly limit effusions, exudations and adhesions. The unfortunate result, at times observed, which has been attributed generally to age, to rheumatic or gouty habit, to too short or too long employment of splints, to improper conduct on the part of the patient or carelessness on the part of the doctor, is commonly, very possibly always, due to

* Trans. Surgical Section Amer. Med. Ass'n, 1894.

imperfect adjustment at the time of the original dressing; the displaced lower end of the upper fragment making such pressure upon the soft parts upon the palmar surface near the wrist as to interfere with both arterial and venous circulation, especially the latter, and that not only directly but indirectly through the induced nervous disturbance. Under such circumstances the ordinary treatment by splint and bandage only makes a bad matter worse, the vessels and nerves being compressed between bone and board. That which is absolutely essential to thoroughly satisfactory repair is early and complete adjustment. This is one of the few fractures in which the chief difficulty lies in securing, not maintaining, apposition. Once secured, only the simplest after-treatment is really required, a band around the wrist perhaps, to lessen the after-spreading due to separation of and later somewhat misplaced attachment of the inter-articular cartilage.

In view of possible after-ligation, as professional opinion is now, it is wiser as a rule to employ some form of splint, plaster-of-paris or other, never extending below the wrist line and thus supporting the hand, which should be allowed to hang free. But the use of such splint is not necessary so far as the break is concerned, provided (and this proviso must be kept constantly in mind) complete apposition of the fragments is secured.

Its manner of production well understood, the difficulties in the way of primary adjustment duly recognized, and the first dressing properly made, this fracture becomes one of the simplest to treat, causes little inconvenience, comparatively, to the subject of it, and is very satisfactory in its end-result.

TRANSLATIONS.

THE FACTORS OF ANEMIA IN DISEASES OF THE RESPIRATORY PASSAGES.

Chabory (*Le Progrès Médicale*, June 16, 1894) remarks that the respiratory apparatus, the organs of the absorption of oxygen, supplies an indispensable unit in the complete evolutions of the red corpuscle. Thus there may be noticed in most of the diseases of the respiratory tract an anemia, the principal factors of which are the following:

Diminution in the caliber of the air-passages. M. G. Sée noticed in 1888 a pseudo-anemia from respiratory inanition. M. Balme has remarked the pallor of children who have a hypertrophy of the palatine tonsils; in young girls the menses appear late, are scanty, and are easily suppressed for long intervals. He adds that not only are the children pale and debilitated, but they are subject to an extreme prostration; the free entrance of air into the chest being prevented, the thorax cannot dilate itself as it should, and the normal and necessary ration of air is not received.

Diminution in the air-absorbing surface and interference in the capillary circulation. If the air-absorbing surface is restricted the quantity of oxygen passing into the blood is diminished, and the circulation of blood in the capillaries is retarded. The lesions of the lungs which hinder hematosis are bronchitis, due to infiltration and thickening of the bronchial mucosa, obstruction of the bronchi, and the covering of their inner wall with muco-pus; asthma, in which there are vasomotor troubles with crises of expiratory spasm; whooping-cough, with the lesions of bronchitis; in congestion, in which there is a flattening of the alveoli by the engorged capillaries; in edema, with serous infiltration of the alveolar walls; in apoplexy, from thrombosis or embolism, in which there is a suppression of a part of the respiratory filter which diminishes hematosis. In emphysema there is a sclerosis of the inter-alveolar walls, absence of contractility of these walls, and consequently a retention of air in the alveoli; in pulmonary sclerosis there is also

a thickening of the inter-alveolar walls; in cancer and tumors of the lung and pleura, there is an invasion of the pulmonary parenchyma by the tissue of the neoplasm; in pleurisy, pneumo-thorax, hydatid cysts, there is compression of the lung, flattening of the alveoli and atelectasis, which diminishes the gaseous exchange. The lungs of broncho-pneumonics present the lesions of bronchitis, of capillary bronchitis; in these patients a whole lobe or a whole lung is hepatized, not permitting the entrance of air to the blood. Acute granular phthisis, characterized anatomically by a multiplicity of miliary granulations, which produce a perinodular hyperemia, a congestion and splenization.

Febrile affections of the respiratory passages. All febrile diseases are accompanied or followed by an anemia, more or less durable and grave, the degree of which is proportionate to the intensity and duration of the fever.

Benign and malignant neoplasms of the respiratory passages. These tumors diminish the caliber of the air-passages, the seat of hematosis, and thus resulting in anemia. Moreover, there is an anemia symptomatic of cancer, whatever may be its seat and its complications, resulting from a diminution in the number of red corpuscles, an increase in the number of white corpuscles, pronounced corpuscular deformity and a decrease in the weight of the solid constituents of the blood.

Hemorrhages of the respiratory passages. These are a cause of anemia, the gravity and duration of which depend upon the amount of blood lost and the frequency of the hemorrhages. The anemia consecutive to these hemorrhages is a true insufficiency in the blood-mass and has been termed oligemia or spanemia.

Pathologic secretions of the respiratory mucosa. The extended surface of the respiratory mucosa becomes covered in certain diseased states with a very abundant secretion, and this secretion is in part a nidus of infection and also a source of spoliation and loss for the entire organism. All suppurations are accompanied or followed by anemia. The more extended the suppurating surface and the more abundant the suppuration the graver the anemia.

Troubles in other organs provoked by affections of the respiratory passages and the causes of anemia. Chronic diseases of the lungs, among others, emphysema with or without catarrh, asthma, chronic pulmonary phthisis, cause dilatation of the right heart, its fatty degeneration, disorders of the circulation, and consecutive modifications in the composition of the blood. Digestive troubles complicating nasal, bronchial and pulmonary affections are very common and very lasting, and these undoubtedly react upon the composition of the blood. Nervous phenomena, such as cough, cephalalgia, insomnia, depression, hypochondriasis, which accompany a number of respiratory affections are equally factors of anemia, as are also long confinement to bed and the rest necessitated by the great weakness of the patient or the dread of hemoptysis.

Composition of the blood in diseases of the lung. In bronchitis the hemoglobin does not fall below 100 grams. In acute pneumonia Quinquaud has noticed that destruction of hemoglobin occurs in the course of the febrile stage; moreover, during the febrile period the serum becomes impoverished in solid materials. In pulmonary emphysema there is also a diminution in the amount of hemoglobin.

To conclude, the author finds that the factors in the anemia in diseases of the respiratory tract are: 1. Diminution in the caliber of the air-passages. 2. Diminution in the air-absorbing surface and interference with the capillary circulation. 3. Fever. 4. Neoplastic evolutions (cancerous) of the respiratory tree. 5. Hemorrhages of the respiratory tract. 6. Pathologic secretions of the respiratory mucosa. 7. Diseases provoked in other organs by affections of the nose, bronchi and lungs.

D.

Cerebral Edema.

Dr. George J. Preston draws the following conclusions in his paper on cerebral edema, in the *Journal of Nervous and Mental Diseases:*

1. Cerebral anemia should receive recognition, both from the clinical and pathological standpoint.

2. Edema of the brain follows the law of edema elsewhere in the body, with the important exception that these laws must of necessity be considerably modified by the anatomical arrangement of the lymph spaces of the brain and its membranes.

3. The effused serum may exert injurious mechanical pressure, and also offers occasion for toxic influences.

CORRESPONDENCE.

STATUS THYMICUS—GONOCOCCI IN GONORRHŒA—TREATMENT OF MALARIA WITH METHYLEN BLUE—EXPERIMENTS WITH TOLYPYRIN AND TOLYSAL.

VIENNA CORRESPONDENT TO THE MEDICAL AND SURGICAL REPORTER.

STATUS THYMICUS.

Dr. T. Schnitzler, Assistant to Professor Albert in the General Hospital, reported on this interesting subject before a recent meeting of the Imperial Royal Society of Physicians of this city. The case was that of a woman, 31 years old, who was suffering from a severe case of Grave's disease. As strumectomy in Grave's disease was performed with good success by several surgeons during the last years, Dr. Schnitzler also decided on that operation. He performed the extracapsulary extirpation of the whole of the right part of the goitre as well as the middle lobe, which was greatly developed, and almost two-thirds of the left lobe. After operation and the application of the dressings the patient's respiration was quite normal, and she also showed reaction to irritation. A quarter of an hour later the respiration suddenly assumed another character; it became flat, and some minutes later the respiration as well as the pulse were quite abolished, and the pupils became maximally dilated. Attempts at revival were in vain and the patient succumbed.

The post-mortem examination revealed the presence of that condition of the body which Prof. Arnold Paltauf has called "status thymicus." They found a considerable persistency of the thymus; and all the lymphoid formations, such as the lymphatic glands, the tonsils, the follicles of the intestines and those of the base of the tongue as well as those of the spleen, were considerably enlarged. There was, moreover, a considerable narrowness of the aortic system; the heart was found to be dilated; red-colored marrow was detected in the large parts of the tubular bones; the brain and the lungs were in a state of anæmia.

From the works of other authors, and particularly those of Professor Arnold Paltauf, it resulted that the condition of the body referred to above—the so-called "status thymicus"—was characteristic of a particularly impaired resistence of such individuals. Professor A. Paltauf has also shown that the opinion according to which death in such cases was due to suffocation by pressure of the enlarged thymicus, was not correct. In cases of the so-called "deaths in narcosis," the "status thymicus" also played a most important part; this was proved by the researches of Professor Richard Paltauf in the Vienna Anatomo-Pathological Institution, and also by the fact that in two cases of "death in narcosis" which had occurred during the last year at Professor Albert's clinic, the post-mortem examination held revealed the presence of the "status thymicus."

The case reported by Dr. Schnitzler was, within a proportionately short interval of time, the third case in which a patient operated on for Grave's disease died as the direct result of the surgical interference, and where the post-mortem examination could prove the persisting condition of the thymic gland. Bardeleben and Gluck also reported, each, on a similar case. Gluck seems to attribute the death in such cases to suffocation owing to pressure of the enlarged gland, whereas Dr. Schnitzler pointed out that the fatal issue in such cases, including those of Bardeleben and Gluck, was to be explained in the way referred to above—that is to say, as the result of an impaired resistance of the organism.

ON THE EVIDENCE OF GONOCOCCI IN GONORRHŒA.

Docens Dr. Finger made a valuable contribution on this subject to the same society. "Wertheim," he said, "was the first to cultivate gonococci on human

blood-serum by means of plate-cultures." This method was, however, too complicated, and Dr. Finger found the cultivation of gonococci on "urine-agar" to be the best one.

As to the biology of the gonococcus, it must be remarked that an acid soil of culture suited it better than a weak alkaline one. The gonococcus began to develop at a temperature of more than 25° C., and a temperature of 36° C. proved very favorable, whereas that of 40° C. killed it. The gonococcus was sensitive to drying processes.

The vitality of the gonococcus in gonorrhœal pus was of great importance from a practical and medico-legal point of view. Cases of transmission of gonorrhœa by means of polluted shirts had been recorded by several authors; this, however, Dr. Finger pointed out, was only possible so long as the pus was not dried up. Gonorhœal pus, so long as it was not dried up, gave positive results, and frequently these results were obtained after thirty-six hours. When the pus was dried up, he could no longer succeed in obtaining cultures, even after moistening with sterile water.

The gonococcus was little sensible to chemical agents. The action on it of nitrate of silver (1:1000) and sublimate (1:6000), during two minutes, could not kill it. Cultures thus treated still gave positive results on inoculation.

As to the question concerning the immunity of urethritis against new infection, the lecturer remarked that in three cases of cured acute urethritis and two cases of chronic urethritis, the inoculations with gonococci gave positive results which could also be confirmed by microscopical examination. These inoculations proved, at the same time, that the gonococcus really was the pathogenic agent in gonorrhœal processes.

Dr. Finger then discussed the question of the relation of the gonococci to the inflammatory foci. In many cases he succeeded in producing the symptoms of acute inflammation of the joints by means of inoculation. In these cases, as well as in those of circumscribed peritonitis, the presence of gonococci could no longer be proved after twenty-four hours. In the cases of eight patients, with imminent fatal issue, the inoculation gave, on three occasions, a positive result, whereas in the five other cases the result was negative. In the first mentioned cases there was no fever, or only a slight one, whereas in the other instances there was considerable elevation of temperature. It was a well-known clinical fact that febrile temperatures had an influence on the course of urethritis, viz., it made the secretion stop, which afterward appeared again. The high febrile temperature thus seemed to confer a temporary immunity against the gonococci, and the immunity of mammals also seemed to be explicable by their having higher temperatures than man.

As to the relation of the gonococcus to the tissues, the lecturer pointed out that Neisser, of Breslau, had opposed his opinion that the gonococci quickly penetrated into the connective tissue. This was, however, found to be the fact in many anatomical examinations of such cases. Frisch had met with gonococci in the glands and the connective tissue of a case of gonorrhœa of the rectum. He even detected them in the surrounding muscles.

With regard to the complications of gonorrhœal infection, he said that they had formerly been looked upon as the product of a mixed infection until Dr. Wertheim had shown that these complications were solely due to the gonococcus. Gonorrhœal arthritis was the most frequent complication, and was, in most cases, to be met with in the primary forms of gonorrhœa. In the case of a boy eight days old, who was suffering from ophthalmoblenorrhœa with gonitis, numerous gonococci were found on puncture of the joint.

Respecting the coloring of the gonococci, the lecturer said that the coloring with borax-methylenblue was the simplest method. The microscopical sections were placed in a mixture of 5 parts of borax and 5 parts of methylenblue in 100 parts of water; then they were washed and discolored in a one-half per cent. solution of acetic acid, and finally kept for a short time in alcohol, Bergamot oil and Canada balsam. These specimens were very sensible to the decoloring influence of alcohol, but less so to acids. The specimens under consideration had, however, the disadvantage that they lost their color after from three to four months.

Dr. Finger arrived at the following conclusions:

1. The gonorrhœal rheumatism is a

true gonorrhœal affection caused by gonococci.

2. The gonococci are also found inclosed in pus cellules in inflammatory processes.

3. The gonococci are able to produce true suppuration of the connective tissue.

4. The view that the gonococcus has an exceptional position, inasmuch as it only produces superficial catarrh of the mucous membranes, must be entirely given up, and the gonococcus is quite analogous to the staphylococcus, the streptococcus and the micrococcus pneumoniæ.

THE TREATMENT OF MALARIA WITH METHYLENBLUE.

Dr. W. Dombrowski reports, in a recent number of the Polish medical journal *Gazeta Cźarska* upon his experience in the treatment of malaria with methylenblue. He had treated five cases of malaria by means of this drug. In the first case 5 grammes of methylenblue were administered within ten days; the drug was well supported. The plasmodia disappeared, the temperature decreased and the spleen diminished in size. In the second case under consideration, the plasmodia also disappeared, and the attacks of the disease were stopped. In the third case, 2.5 grammes was the total amount given; no plasmodia could be detected any longer, and no attack was presented during tho. last three days of the patient's sojourn in the hospital. In the rest of the cases the success was a similar one.

The treatment with methylenblue was commenced at different stages of the disease, and it was indifferent for the therapeutical success as to whether the drug was administered before, during or after the attack. One attack, however, invariably occurred after the administration of methylenblue, but this attack was generally less severe than the foregoing ones, *i.e.*, without rigors and perspiration, and only characterized by slight elevation of temperature. It was only in two light cases that the methylenblue immediately stopped the attacks. In other cases the drug had to be given for at least forty-eight hours in order to remove the attacks.

Out of eleven respective cases which Dr. Dombrowski had an opportunity of observing, ten were entirely cured. In the eleventh case under consideration, the fever, indeed, disappeared, but plasmodia could be proven to be present in the blood after seven days from the last attack, and the spleen was still rather enlarged.

Dr. Dombrowski concludes, from the uniform good results which he had obtained in the cases now referred to, that methylenblue may be considered to be a specific remedy for malaria. The most essential property of this drug consists in killing the plasmodia. As to the bad after-effects, Dr. Dombrowski saw nausea and vomiting only in one case in which methylenblue was administered for a long time; otherwise the remedy was well supported. No albumen could be proven in the urine; the latter was merely of a blue color after the first dose of methylenblue.

EXPERIMENTS WITH TOLYPYRIN AND TOLYSAL.

Dr. Aladár Anjeszky, of Budapest, has carried out a number of experiments with tolypyrin and tolysal. As to the antipyretic effect of tolypyrin, it was observed that in the case of individuals who were free from fever, from 3 to 4 grammes of the drug—one gramme being taken every two hours—diminished the temperature only from 0.5° to 0.8° C., whereas in febrile patients the effect was very strong and prompt. The patients, according to the degree and the quality of the fever, received from 1 to 4 grammes of the remedy in doses of 1 gramme every hour. After the administration of the first powder the temperature was measured half an hour later, and later on every hour. In the case of moderate fever the temperature decreased after the administration of the first gramme of the drug, and after half an hour it diminished only some tenths of a degree. The decrease after three hours reached from 1° to 5° C. Some perspiration was in most cases observed at the beginning of the effect of the remedy. In slight fever one could obtain a state of apyrexy lasting from 7 to 8 hours with from 1 to 2 grammes, and when the temperature rose anew it was no longer accompanied with rigor. In high fever, from 3 to 4 grammes were required to produce apyrexy, but it then lasted for from 10 to 16 hours. Even in the stage of the acme 3 grammes of tolypyrin were able to lower the temperature from 40° C. to 36.8° C., and the patient remained free from fever during 14 hours. In one case of bilateral

infiltration of the apices of the lungs the drug caused a subnormal temperature of 34.8° C.

Among the concomitant effects produced by tolypyrin, the perspiration must be noted at first. The sweating was not very severe; only in the case of phthisis it used to be specially copious. Its duration varied, but generally it did not overlast the apyretic stage. Of gastric symptoms, nausea and vomiting were noted on two occasions; in one instance, urticaria was seen. In general, the drug was well supported by the patients. The tolypyrin failed to prove useful as an anti-rheumatic and analgesic.

With tolysal, *i.e.*, the salicylate of tolypyrin, the following results were obtained:

In individuals free from fever, the tolysal, when from 5 to 6 grammes of it were administered in hourly doses of 1 gramme, lowered the temperature only nine-tenths of a degree. In the case of patients with moderate fever, the temperature was not influenced by 1 gramme of tolysal. In order to produce an antipyretic effect, from 2 to 3 grammes of tolysal had to be administered in doses of 1 gramme every hour, whereas it had no effect when it was given every two hours. The decrease of the fever only occurred after the administration of the second dose (1 gramme), after from one-half to one hour, but this decrease did not amount to more than some tenths. A more intense effect was obtained after the third powder, but the decrease in this case did not exceed 1° C. From 4 to 5 grammes of tolysal, administered in doses of 1 gramme at intervals of one hour, were followed by a decrease of temperature of from 1½° to 2° C. In high fever, from 6 to 8 grammes had to be given to obtain an effect on the temperature; thus in a case of abdominal typhoid fever, 5 grammes of tolysal lowered the temperature only 1° C., whereas tolypyrin proved excellent in the same case.

Excellent results were obtained with tolysal in the case of rheumatism of the joints. In these cases the patients received 6 grammes of tolysal daily, and the effect was already on the second day a striking one; the pains diminished, the inflammatory symptoms of the parts and the fever disappeared, and the general condition improved.

Dr. Anjeszky arrives at the following conclusions:

1. Tolypyrin is a reliable antipyretic remedy.
2. Small doses of tolypyrin (1 to 2 grammes) cause an apyrexy of from 7 to 8 hours, and larger doses (3 to 4 grammes) one of from 10 to 16 hours.
3. Tolypyrin has no bad after-effects.
4. Tolypyrin has not proved useful as an analgesic.
5. Tolysal is but a weak antipyretic, and it exerts an influence only in large doses.
6. The antipyretic effect of tolysal does not extend over more than 4 hours.
7. Tolysal is an energetic anti-rheumatic, and may be substituted for salicylate of sodium where this cannot be borne.
8. In the case of pains of a rheumatic origin, tolysal exerts an analgesic influence.

Dietetic Treatment of Patients Threatened with Cerebral Hemorrhage.

Dr. Joseph Collins, in *Food:* The diet for these patients, varying as it must with individuals and their digestive peculiarities, should be mainly of carbohydrates, sparingly of hydrocarbons, and still more sparingly of nitrogenous food stuffs. The essential points to remember about the latter two are, that the first is given as an energy producer and as an aid in the complete oxidation of other food stuffs, and that when the last one is administered it should be seen that its complete oxidation is thoroughly performed. So much for the administration of the organic food stuffs. A word concerning the inorganic. Water, particularly, is necessary. The important part played by water in the treatment of arterial degenerations, particularly when such degenerations are dependent upon improper and insufficient metabolism, is not easily overestimated. The presence of it in the digestive tract, influencing as it does the rapidity of osmosis, filtration, and the other principles involved in absorption, and its effect in lowering the specific gravity of the blood after it is absorbed, are both very important, not to speak of its being the vehicle for the removal of most of the effete matters from the system. It favors absorption, facilitates oxidation, and promotes thorough metabolism. In all cases of arterial degeneration, with threatened cerebral apoplexy, water should be given in small quantities, frequently repeated, and should thus become a staple part of the diet.—*New York Med. Times.*

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SATURDAY, OCTOBER 27, 1894.

EDITORIAL.

THE ETIOLOGY AND PREVENTION OF DIPHTHERIA.

At the Eighth International Congress of Hygiene and Dermography, at Buda-Pesth, there was a most interesting and instructive discussion on diphtheria, more especially on its etiology and prevention. The following summary of the conclusions by Loeffler is of much importance:

1. The productive agent of diphtheria is the diphtheria bacillus. Dispute as to the etiological definition of this bacillus exists no longer. We can, therefore, henceforth indicate as diphtheria such forms of disease as are infested with the bacillus.

2. Not infrequently cases appear in the early stages to the clinical observer as true diphtheria, which, however, are caused by other organisms, as streptococci, staphylococci, etc., and in light or graver form may be mistaken for true diphtheria. But the differential diagnosis can be made through bacteriological research. . . .

3. Diphtheria epidemics show a various character, as do many other epidemics of infectious disease. . . . In the same epidemic instances of severe and light forms of the disease frequently alternate irregularly.

4. The variations, of course, will be determined by several factors: (*a*) By difference in the number and virulence of the diphtheria bacilli; the causes of the latter are not yet absolutely known. (*b*) By concomitant bacteria, and, indeed, as much by pathogenic as saprophytic; the processes of infection with regard to the diseased mucous membrane in the passages and in the nose, appear to influence the course of the disease unfavorably, in part by increasing the virulence of the bacilli, in part by weakening the body through absorption of decomposed products. (*c*) By individual tendencies not yet thoroughly recognized.

5. The diphtheria bacillus can appear in the passages, especially of the nose, of separate individuals without causing indications of sickness, which it first induces when it has actually established itself. Lesions of the mucous membranes, small eruptions, catarrhal changes are favorable to its residence. In brief, meteorological conditions, giving admission by the first approach to catarrh, especially cold, damp weather, appear to favor the sickening from this cause. But this influence has to be more closely observed.

6. Diphtheria is most rapidly communicated by direct contact between sick and well, through spitting, coughing, sneezing, kissing and grasping of the hands, whereby the hands come into contact with fresh secretions, but also freely through utensils which the sufferer has fouled with his excretions, by beverages, food, eating and drinking vessels, cast-off clothes and other articles as pocket-handkerchiefs, playthings, even long after their actual infection.

7. The sick one is infectious so long as he has bacilli upon the mucous membranes. The bacilli usually disappear with or very soon after the disappearance of the local signs, but they may be detected still lively and virulent in the passages or nose for weeks or even months.

8. In organic matters condensed and excluded from light the bacilli can maintain themselves for a period of months outside the body. Accumulations of dirt, dark and closed dwellings favor thus the preservation of bacilli and the extension of disease.

9. As a specially noticeable vehicle for the extension of the disease is to be noted the crowding together of susceptible individuals, especially in families of many children. . . . Other gatherings may offer facility for the extension of the disease, such as schools, barracks and the like.

10. The diphtheria bacillus is so far not identified with certainty as the cause of other diseases similar to diphtheria, or of other spontaneous disease of lower animals. The possibility of the conveyance of true diphtheria from sick animals to human beings is thus outside of our present knowledge. . . .

11. The prophylactic means to be considered are: (*a*) Care for cleansing, keeping dry, sufficient ventilation and lighting of the dwelling; (*b*) Careful cleansing of the mouth and nose, gargling with weak solutions of common salt and carbonate of soda, thorough brushing of the teeth, extraction of bad teeth, attention to the deeper cavities of the tonsils and the removal of hypertrophied tonsils; (*c*) Cold douching of the throat in times of diphtheria prevalence.

12. Every case suspected as diphtheria must, when possible, be bacteriologically investigated. The physicians should have easy access to the materials for carrying on the culture work. The investigation should be carried on by a specialist, as in cases of cholera.

13. All cases proven bacteriologically to be true diphtheria, as well as all cases suspected as diphtheria, . . . should be dealt with under police regulations. [Strict isolation from other individuals and the most rigid disinfection carried out.]

14. In order to restrict as much as possible the spread of the bacilli by the sick, a local anti-bacillar treatment must be employed with a view to prophylaxis against the early stages of the disease.

15. One of the most effective means against the spread of diphtheria to be cared for, is the protective inoculation of susceptible individuals in the neighborhood of the patient, especially children. In proportion as the innocuousness of Behring's serum cure through preventive injection is established for curing or prophylaxis, it appears worth while to develop further, as far as possible, the art of inoculating it in families and in school classes in which diphtheria cases have occurred.

16. In every case of diphtheria disinfection is imperative. This is needed for all utensils for the sick. . . .

17. Convalescents from diphtheria must not mix freely with others (or children go to school) until bacteriological investigation has proved the removal of the bacilli, and the sick, after a warm bath with soap, have been thoroughly cleansed and have put on clean clothing.

18. On the outbreak of diphtherial epidemics notification should be given in the public press.

ABSTRACTS.

THE NOSE AS A FREQUENTLY UNRECOGNIZED CAUSE OF DISEASE.*

LOUIS J. LAUTENBACH, †M.D., PHILADELPHIA, PA.

Hitherto the nose has been rather a neglected organ. It has only been of recent years that we have begun to learn of the influence it exerts upon even remote parts of the body. That this neglect has occasioned a great deal of suffering which could have been prevented, is evident to all who have devoted themselves to nasal medicine. Unfortunately, nasal troubles being rarely accompanied by pain, are in consequence too often neglected by the physician as well as the patient, and a difficulty which might have been easily curable at first occasions a condition which may remain through life and even terminate in death. Naturally, those organs are affected which are either anatomically or functionally connected with the nose. It is connected anatomically with the organs of sight and hearing, with the throat and lungs as well as the cerebrum; indeed, the olfactory nerve is but a bulbous elongation of cerebral tissue containing gray matter.

Functionally, it is to be considered not only as a sense organ, but as having imposed upon it other duties. It drains the tears from the eyes, and through the Eustachian tube the mucous secretions from the ears; it aids in the function of hearing by allowing the sound to pass freely up the Eustachian tube; it prepares the air for the lungs by moistening and heating it and cleansing it from particles of dust; and in some way as yet unknown to us, exercises some control over the faculty of memory.

Considering the intimate relation existing between the nose and these other parts, it is easy to understand how widespread, and how subtle and yet serious may be the mischief occasioned by neglected disease of this organ.

Perhaps nowhere is its influence more often discernible than upon the air passages. Pharyngitis, tonsillitis, laryngitis, bronchitis, and even asthma, pneumonia and pleurisy are traceable directly to a want of the proper performance of the nasal functions as well as to a direct extension of the nasal inflammation. Pharyngitis and tonsillitis are often occasioned or aggravated by the irritation of the nasal discharges flowing constantly over the posterior wall of the pharynx. Simple catarrhal laryngitis and bronchitis are rarely found except in connection with head colds, and they are very difficult to cure, unless the nasal conditions be relieved; in fact unless these are relieved, the bronchial and laryngeal inflammations are prone to recurrence. How often do we hear of children who are, as we say, subject to bronchitis! Unless this tendency is checked, the child is apt to be stunted in his full growth, and in addition will probably show some chest weakness throughout life. Fully nineteen out of twenty such cases can be cured only by careful, systematic treatment of the nose in connection with the chest trouble. Pneumonia and pleurisy, when occasioned by nose disease, usually originate through mouth-breathing, preventing the proper preparation of the inspired air. This is more frequently the cause of these diseases than it is usually considered to be. That this want of proper preparation is very dangerous, is shown by the fact that the operation of tracheotomy is almost invariably followed by a pneumonia. It is true that by this operation the air is carried more directly to the chest than by mouth-breathing, but mouth-breathing exerts precisely the same influence as the tracheotomy tube, except only in a more limited degree. In mouth-breathing the surface over which the air passes, before it enters the lungs, is diminished to perhaps a little over half the normal, whereas after the operation of tracheotomy, it is diminished to less than one-third normal.

*From advance proof-sheets Codex Medicus Philadelphiæ, No. 1.

†Surgeon to the Pennsylvania Eye and Ear Infirmary; Throat and Nose Physician to Odd Fellows' Home, etc., late Chief of Eye and Ear Clinic, German Hospital.

What proportion of cases of asthma are caused directly and indirectly by nose disease, I have no means of knowing. That, however, it is not an infrequent cause, has been taught me by experience. Quite a large number of cases of asthma present markedly abnormal conditions, particularly bony and mucous hypertrophies, occasionally combined with polypi. I have been fortunate, in all the cases which I have treated, in at least relieving the asthmatic condition and, in a large proportion, curing it by careful nose treatment.

Perhaps next in frequency to the diseases of the air passages thus occasioned are the stomachic and often the consequent intestinal disorders; children, particularly infants, are especially the sufferers. The nose colds are accompanied by profuse discharges which are not gotten rid of by the mouth, as is usually the case with adults, but are swallowed and, fermenting in the stomach, give rise to cramp-like pains, vomiting and intestinal disorders, the food not being digested in consequence of the irritation of the stomach and intestinal walls by the products of fermentation. In this way arise many of the cases of inanition, cholera infantum, etc. In the adult, either through neglect or more often through the passing of the mucous discharge down the œsophagus during sleep, we are apt to have flatulent dyspepsia and an acid stomach; when the cause is unrecognized, these cases progress for years, until the disease is well-nigh incurable, on account of the changes which have occurred in the walls of the stomach, through the constant irritation by the ferments produced.

All practitioners well know that most diseases of the ears proceed either from an extension of nasal catarrh, or result from the closure of the nose which prevents the proper ventilation of the ear and the flow of mucus through the Eustachian tube. In this way, a closure of the tube is produced which results in an inflammation of the middle ear, often with involvement and perforation of the drum head, and even extension of the inflammation to the mastoid cells. These conditions are more prone to occur in the infant than in the adult, as the Eustachian tube, being so much smaller, is more easily occluded, and again, the bony walls being much thinner and more porous favor the ready extension of septic influences.

Upon the eye the nose exerts its influence by an extension of the inflammation up the ductus ad nasum, as well as by occlusion of the same. Thus are caused lachrymal abscesses and epiphora, catarrhal conjunctivitis as well as corneal troubles. Some authorities consider that phlyctenular conjunctivitis may be thus occasioned. I have frequently relieved severe persistent pain of the eyeball, as well as cases of asthenopia, by nose treatment, after the most careful eye treatment had failed.

Eczemas of the face, observed in patients suffering with nasal catarrh, especially as found in children, are rarely curable unless the nose be restored to its normal condition.

As illustrating cerebral symptoms occasioned by nose disease, I will mention severe, persistent headaches, giddiness, loss of memory and of ambition, and a generally demoralized condition of the mental faculties; all of these, in many instances, have been relieved by nose treatment. Perhaps the most marked and noticeable of these symptoms is the loss of memory, as it is now a well established fact that nasal troubles often profoundly influence this faculty. Perhaps there is no class of patients who are more grateful when relieved than those who are thus affected. The failure of memory, seeming to threaten the very foundations of the soul, brings close to the patient the possibility of that faculty being lost which enables him to be in close communion with his fellow-man—rationalism (or sanity). I am at present treating a most marked case of this kind. She feels as if she were already half insane; fortunately, decided improvement has occurred as a result of the treatment of the nose.

Even in epilepsy it is sometimes the determining factor. I know of two cases in whom the spasms disappeared, after careful nose treatment.

Hay fever, the exact pathology of which is as yet somewhat in doubt, which exhibits phenomena attributable to the nervous system, as well as such as originate in the air passages, has, in numerous instances, been cured by the removal of hypertrophies and polypi from the nostrils, and the contraction of the soft, congested, elastic nasal tissues.

In cases of general ill health of a mild type, presenting often some irritability of the throat, some slight stomachic disorder,

particularly flatulency with a tendency to constipation, with a sodden colorless skin inclined to be cold, with an inaptitude for exertion, especially mental effort, it will occasionally be found that these symptoms arise from partial nasal occlusion, with night mouth-breathing and consequent deficient oxygenation of the blood.

I trust even these few cursory remarks will prove the importance of the more frequent examination of the nose and its subsequent judicious treatment.

In all diseases of the ears should this examination be made. It will prove valuable in many cases of disease of the upper air passages as well as of the chest; particularly will its value be appreciated in studying these diseases in children. In cases of stomachic and intestinal disorders, the procedure should not be neglected. With children it should invariably be made. It is essential in many cases of diseases of the eyes. I believe it should not be omitted in obscure cerebral diseases, particularly if there be loss of memory. In obscure cases of ill health without any marked lesion, this examination should be made and will occasionally prove of great value.

In concluding the subject I will say that if the nasal examination and treatment advocated be made in the class of cases here indicated, I feel assured that the successes resulting from treatment will be greater than in the past, and unexpected and gratifying improvement will sometimes occur in cases that had failed to respond to one's best energies.

CRIMINAL RESPONSIBILITY OF THE INSANE.

The subject of "the law in relation to the criminal responsibility of the insane" has once more been placed before the public for discussion by means of a paper read before the British Medical Association at Bristol, in August last, by Dr. Lionel Weatherly. The answers of the judges in 1843 to the questions put to them by the House of Lords form the basis of the legal position taken up in criminal cases where the plea of insanity is urged. The direction given by the judge to the jury in such cases is that to establish a defense on the ground of insanity, it must be clearly proved that at the time of committing the act the party accused was laboring under such a defect of reason from disease of the mind as not to know the nature and quality of the act he was doing, or, if he did know it, that he did not know that what he was doing was wrong. The corollary to this juridical direction is stated to be that if the accused were conscious that the act was one which he ought not to do, and if that act was at the same time contrary to the law of the land, he is punishable. Objection has been urged time after time to this statement of the position; and the righteousness of decisions in individual cases where the judge has directed the jury strictly in the sense here given, and where the jury have followed that direction, has frequently been called in question with such vehemence as to lead to a remission of the sentence. In other cases, as Lord Blackburn put it, "the jury have taken the bit between their teeth," and defied the judge's guidance as to the law by their verdict, asserting their belief in the prisoner's insanity and irresponsibility. "We mental physicians," says Dr. Weatherly, "maintain that the existing law is wrong, and that it is not in accord either with our practical experience or with the advance of mental science." This advance of mental science, whatever it may amount to, has at all events been the means of initiating the process of education which has made itself manifest in the minds of our judges in later years, and which has so largely tended to turn the fifty-year-old rigid dictum of "knowledge of right and wrong" into a merely traditional usage, supported in consonance with a practice which, as Sir James Stephen says in his "History of the Criminal Law," he has himself followed on several occasions, and which, he adds, no judge can be expected to do otherwise than follow until some more binding authority is provided. As a proof of this change of front, leaving out the idiosyncrasies and methods of a limited few of the judges, we cannot do better than quote Sir James Stephen's words: "I cannot help feeling, however—and I know that some of the most distinguished judges on the Bench

have been of the same opinion—that the authority of the answers (given by the judges in 1843) is questionable, and it appears to me that when carefully considered they leave untouched the most difficult questions connected with the subject and lay down propositions liable to be misunderstood, though they might, and I think ought to, be construed in a way which would dispose satisfactorily of all cases whatever." This statement was made in 1883, and since that date other judges have in some cases more or less openly expressed their difficulty as to the applicability of the ruling of 1843, or have modified its technical phraseology, while in other cases they have, in their summing-up to the jury, tacitly ignored the ruling. This being so, we are fully justified in holding that the legal test of responsibility in criminal cases where the plea of insanity is raised is not only insufficient, but is also misleading and capable of doing grave injustice if strictly adhered to. What is the remedy which Dr. Weatherly proposes for this state of things? He suggests the following as the questions which should be placed before the jury, and which the medical experts should be examined upon: 1. Was the accused at the time of the commission of the act with which he is charged, and before that time, laboring under such mental disease as to render him certifiably insane? 2. If insane, how far was crime the outcome of his insanity? If, as Dr. Weatherly says, the legal dictum is to be condemned for its want of latitude, we fear that the condemnation applicable to Dr. Weatherly's proposed questions is that they permit too much latitude. The risk in this case will come to be that in the search for insanity the question of mere criminality will be apt to be lost sight of. As the writer of the leading article in the *Times* of August 4th says—and not without some truth—the proposed change in the law "would throw upon the jury a task infinitely more difficult than it has to discharge at present." He goes on to ask, How is a jury to determine whether a man is "certifiably insane?" How is any man to attach a definite meaning to "certifiably insane?" "The phrase can only mean that a couple of doctors can be found to certify that in their opinion the man is insane." Under ordinary circumstances the meaning or the application of the phrase is simple enough, but its use in relationship to the complex issues that have to be determined in courts of law in criminal cases could scarcely fail to lead to confusion by its vagueness, for it is the duty of medical men to help the law not only to avoid hanging insane persons, but also to prevent sane and responsible criminals from evading justice on a false plea. In seeking for a solution of this great difficulty we, as medical men, must be prepared not to overlook any standpoint from which the mental elements of responsibility ought to be considered. The question is not a purely medical question any more than it is a purely legal one. Reverting once more to Sir James Stephen, we are glad to be able to quote from him in this relation the following important expression of opinion: "I believe that by the existing law of England those elements (so far as madness is concerned) are knowledge that an act is wrong and power to abstain from doing it, and I think it is the province of judges to declare and explain this to the jury." The admission of this element of "power to abstain" is, to our thinking, all-important and should never be lost sight of when the question comes up. In connection with the points raised in Dr. Weatherly's paper, which dealt very cogently and straightforwardly with the subject of the existing state of the law, influential subcommittees of the British Medical Association and the Medico-Psychological Association have been appointed to investigate the whole position of the case and to report. The subject will, therefore, be again brought to public notice in due course.

Salicylic Acid in Ringworm.

Salicylic acid is highly recommended as an application to ringworm. It may be used as an ointment, but is much better as a saturated solution in collodion. One application is often all that is necessary to effect a cure, but more may be necessary. The pain caused is not usually severe.—*Mass. Medical Journal.*

Painful Dentition.

℞

Muriate of cocaine	gr. iss.
Tincture of conium	āā ʒij.
Syrup	

M. Sig.: Rub on the gums several times daily.—*New York Polyclinic.*

THE RELATION OF SEWER-GAS AIR TO TYPHOID FEVER.

Much light has recently been cast on the part played by sewer gas in typhoid fever infection. It has been shown that sewer air is as free from disease germs as ordinary air, but while it is probably not the carrier of typhoid germs, it is nevertheless an important factor in typhoid infection, by reason of its devitalizing effect on the human organism. Suffering under the debilitating influences of the poisonous gases sewer air contains, the natural powers of resistance possessed by man against parasitic organisms are lowered to such an extent that he falls an easy victim to their attacks and the disease is established.

The effect of inhalation of sewer gas has recently been investigated by Dr. Alessi through experiments on animals—rats, guinea-pigs and rabbits. In one of his experiments he exposed forty-nine rats to sewer gas, by means of boxes with perforated bottoms placed over drains. An equal number was likewise confined, but not subjected to the poisonous gas. After about two weeks both sets were inoculated with weak culture of the typhoid bacillus. As a result of this thirty-seven of those subjected to the noxious gases died, while but three of those not so treated succumbed. Out of seventy-two guinea-pigs subjected to poisonous gases, fifty-seven died after inoculation with the typhoid bacillus; in an equal number not subjected to the depressing influence of impure air, but inoculated with the same culture, none died. With rabbits the results were even more striking, for every one that had inhaled the gas and was inoculated died, and all that were kept in ordinary atmosphere were proof against the inoculations. The highest mortality in the animals occurred when they were inoculated during the first two weeks; those experimented with during the third week showed a mortality almost one-third less than those earlier treated, which would go to show that a certain degree of tolerance is established for the noxious substances when habitually inhaled.

These experiments are certainly very interesting, and the results obtained appear to clear up a subject not yet well understood. Before the conclusions, however, can be adopted as fixed facts, confirmation by other experimenters must necessarily be offered.—*Editorial Pittsburg Med. Rev.*

CHEMICAL, PHYSICAL, AND BACTERIOLOGICAL STUDIES UPON AIR OVER DECOMPOSING SUBSTANCES, WITH SPECIAL REFERENCE TO THEIR APPLICATION TO THE AIR OF SEWERS.

Dr. Abbott, at the Congress of American Physicians and Surgeons, said that under ordinary circumstances the difference between the chemical composition of the air from sewers and that of the atmosphere outside was very slight, and that, contrary to general opinion, there were comparatively few bacteria. It was also very commonly, but erroneously, supposed that sewer-gas was under very decided pressure. Professor Chandler had collected abundant evidence to the contrary. There was, moreover, not a single conclusive demonstration that the air of sewers stood in an etiological relation to many diseases for which it was popularly supposed to be accountable. The fact that the air in sewers was not under pressure, as a result of decomposition of the sewage, together with the fact that sewers were far from being air-tight, showed that the air of sewers was not likely to be driven out of the sewers under any great pressure. But little was known as yet regarding the nature of the bacteria found in the air of sewers. Experiments had been made at the laboratory, under his direction, with a view to determining the effect of the breaking of gas-bubbles on the conveyance of micro-organisms through the air. After endeavoring to simulate the natural conditions, it was found that such bubbling had but little influence of this kind. Bubbling was not a frequent condition in sewers, and, even should it occur, it was hardly conceivable that this would result in the transfer of micro-organisms from the sewer through the various branches and pipes leading to the houses. Then, again, if many pathogenic bacteria were present in the air from the sewers, those who worked in the sewers would show it in the effect on their health.—*Universal Medical Journal.*

Errors in paging, all here.

THE LIBRARY TABLE.

BOOK REVIEWS.

Text-Book of Abdominal Surgery. A Clinical Manual for Practitioners and Students. By Skene Keith, F.R.C.S.Ed., assisted by George E. Keith. M.B., C.M. With illustrations. Philadelphia: J. B. Lippincott Co. 1894. Pages 508.

Based as this volume is to a large extent upon the immense experience of the celebrated Dr. Thomas Keith, whose early results—about 15 per cent. mortality after ovariotomy—were considered, at the time, so remarkable that they were described as "doubtful," and whose later results have been called "phenomenal," the authors have been able to present a masterly work upon the department of surgery that has assumed the foremost place within the last fifteen years. They have wisely grouped the subject under two main headings, namely, the surgery of the abdomen, and the surgery of the abdomen peculiar to women. In the former, after disposing of the points of general interest, such as tapping, exploratory incision, the examination of the withdrawn fluids, phantom tumors, the preparation for an abdominal operation, the technique of the operation, and the after-treatment, special chapters are devoted to a separate study of the peritoneum, the stomach, the intestines, the appendix, the liver, the kidney, and the spleen. The gynecologic section, while largely concerned with the ovaries and their pathologic conditions, includes also a consideration of the subject of uterine fibroids and the various modes of treatment that have been adopted, and a short discussion of the obstetric complications requiring surgical intervention.

The book is replete with valuable suggestions, and merits a careful reading. There are many points, however, which it shares in common with other English works, in which it differs radically from the teachings of the American writers. Notably is this the case in regard to the technique and after-treatment of celiotomy. The announcement that "the patient sits up in bed on or about the twelfth day, and gets up for the first time at the end of a fortnight," is widely at variance with the practice of the American abdominal surgeons, and, observed from our standpoint, there is given the subject an almost ludicrous aspect, when the authors proceed to apologize for this late (?) getting up, which, say they, is to "prevent, as much as possible, the risk of phlegmasia dolens." They seem to be happily oblivious to the imminent danger of ventral hernia, to which such a practice cannot fail to expose their patients. It would be interesting to inquire into the subsequent histories of patients subjected to this peculiar management of operative convalescence. Again, the minds of the skilled surgeons on this side of the water rise up in revolt when the advice is given to open the bowels of a patient convalescent from an acute peritonitis with doses of that abominable and nauseating mixture, the infusion of senna-pods; it seems like a glimpse into the methods of our medical forefathers of a less enlightened age that has now forever gone. Cauterization of the pedicle after ovariotomy is still favored, it being claimed that the only advantage the ligature possesses over the cautery is in the question of time. In this country, among progressive surgeons, the cautery, as far as abdominal operations are concerned, is relegated, along with the obsolescent carbolic spray, to the realm of surgical curiosities. Laparo-electrotomy (*sic*) is recommended among the surgical measures to be employed for the relief of obstetrical complications, notwithstanding the fact that this operation, with a mortality of fifty per cent. or more, is now looked upon as obsolete by the obstetricians of the world. Again, when we read that there is no especial tenderness attached to the tumor of an extra uterine gestation, we are led to the conclusion that the writers have fortunately escaped encountering many of these exceedingly painful and distressing cases.

Notwithstanding such peculiarities as these just enumerated, and which are largely sectional in their nature, the book is one of undoubted merit and will claim for itself more than the ordinary amount of attention from abdominal surgeons. D.

A System of Legal Medicine. By Allan McLane Hamilton, M.D., and others. E. B. Treat, 5 Cooper Union, New York. 1894.

In this book there is no evidence of an over-weening desire to get into the "book world," or of that effort which is technically called "book-making." All its chapters are written by men of scholarly attainments—men eminent in the chosen departments of their profession. The number of contributors gives to the style of the work an engaging interest. It is all it claims, encyclopedic, and more. Its special articles show that their authors thought into their subjects and not around them. The new material is made up of the new facts which modern research and studiously directed scientific experiment have evolved. The strength of the book lies in its carefully collated facts—living facts, vital to the present, not obsolete ones. The reader will be impressed by the clearness and conciseness of all the articles. They bear every evidence of great care and research, of honest, faithful and skillful work. In exposition of principles the work is logical, and is exact in its citations and deductions. Space will only

permit reference to a few of the important subjects treated:

"Medico-Legal Inspection and Post-Mortem Examination."

"Death in Its Medico-Legal Aspects."

"Blood and Other Stains."

"Hairs and Fibers."

"Identity of the Living."

"Homicide and Wounds."

"Inorganic Poisons."

"Alkaloidal and Other Organic Poisons."

"Toxicology of Ptomaines and Other Putrefactive Products."

"Medical Jurisprudence of Life Insurance."

"Legal Relations of Physicians and Surgeons," etc.

The article on the "Legal Relations of Physicians and Surgeons" would of itself make the book valuable to the medical profession. It condenses the law, as about settled in all the States, as it applies to physicians and surgeons in their relations to their patients and to one another. The author treats the subject under the important subdivisions of—

"Legislative Restrictions on Medical Practice."

"License and Examining Boards."

"Unprofessional Conduct."

"Legal Disabilities of Irregular Practitioners."

"The Contract for Fees."

"Who Is Liable for the Fee?"

"Professional Confidences."

"Sanctity of the Person."

"Criminal Offences," and other important departments of the general subject.

The book should receive a cordial reception from the profession. It contains very much the medical man needs to know. It will fill an important place in the professional library of the physician that is vacant without it. It should be kept in mind that the medical practitioner may be called upon at any moment to give evidence in a court of justice in a criminal case, and it is therefore important that he should know something of medical jurisprudence. R. P.

Chemistry: General, Medical and Pharmaceutical. Fourteenth edition. By John Attfield, F.R.S. Philadelphia: Lea Brothers & Co. 1894.

The writer's ideal of a work on chemistry for the use of students is one in which not only the *science* of chemistry is taught, but in which chemistry of every substance interesting the followers of medicine and pharmacy, is mentioned, according to its importance, at more or less length.

In the first part of the work chemical philosophy is considered; next comes the elements and the compound radicals, with their synthetical and analytical relations; then follows the chemistry of organic substances. The last chapters are the most interesting to the physician, for they treat of chemical toxicology, the chemistry of the urine, and likewise the microscopic appearance of morbid urine and the examination of calculi. O.

A Manual of Instruction in the Principles of Prompt Aid to the Injured. By Alvah H. Doty, M.D. Second edition. New York: D. Appleton & Co.

A manual such as this, is as valuable to the laity as to the trained nurse or the hospital steward. It contains an important chapter on hemorrhage, which is made valuable by cuts illustrating the lines of the important arteries and the methods of compressing the great vessels. The chapter on poisons is of great importance, but there are too many remedies for the various poisons. It is far better for those who may have to act in an emergency, to have a small stock of remedies which they can know well, than a whole store of indefinite ideas which only come to the mind to create confusion when an exigency arises. The author makes a mistake when he says that the symptoms of poisoning by mushrooms come on an hour after their ingestion; in certain forms poisonous symptoms do not make their appearance until ten or twelve hours afterward. Considered as a whole the manual is very well written.

J. O.

Treatment of Typhoid Fever. By D. D. Stewart, M.D. The Physician's Leisure Library. Geo. S. Davis, publisher, Detroit, Michigan.

The subject is well divided and considered under the head of prophylaxis, special and general; the specific and complications. The author departs from the common acceptation when he declares that "the Eberth germ . . . is not a specific micro-organism, but a modified or involution form of bacilli, all of which differ in form, size, and methods of growth." Otherwise the work is in perfect harmony with the most recent teaching.

Where to Send Patients Abroad for Water Cures and Climatic Treatment. By Dr. Thomas Linn. The Physician's Leisure Library. Geo. S. Davis, publisher, Detroit, Michigan.

This is a reprint of a small English book issued several months ago. Every physician who sends a patient abroad would do well to advise him to obtain a copy. The last chapter is especially valuable, for it contains an alphabetical list of maladies and the best places in Europe suiting the disease for which the patient is sent abroad.

Essentials of the Diseases of the Ear. By E. B. Gleason, S.B., M.D. Philadelphia: W. B. Saunders, 925 Walnut Street. 1894.

This book has been designed by the author for the use of advanced students entering upon work in an ear dispensary, and for physicians who may care to acquire more than the meager outline of otology as ordinarily

furnished by the medical schools. The essentials of otology are stated as briefly and concisely as accuracy will allow.

The treatment employed is such as the long experience of an aurist has proven to be most successful.

List price $1.00; 89 illustrations in the text.

Essentials of Physics. By Fred. J. Brockway, M.D. Second edition revised. Philadelphia: W. B. Saunders, 925 Walnut Street. 1894.

This is a book written for the use of the medical student in the early part of his course, and for the benefit of the hurried physician who may wish to bring to mind once more physical facts the exact principles of which may have escaped his memory.

Outlines of Obstetrics. By Charles Jewett, A.M., M.D., edited by Harold F. Jewett, M.D. Philadelphia: W. B. Saunders, 925 Walnut Street. 1894.

The syllabus is designed for the use of the medical student in his course on obstetrics, and as a convenient hand book for reference to the practitioner. The subject of obstetrics is not treated exhaustively in this work, but it is accurately and concisely described.

Materia Medica Pharmacy, Pharmacology and Therapeutics. By W. Hale White, M.D., F.R.C.P., edited by Reynold W. Wilcox, M.A., M.D., LL.D. Second American edition. Philadelphia: P. Blakiston, Son & Co., 1012 Walnut Street. 1894.

This is a work designed for the practitioner as well as the student.

It contains a separate list of all the recent non-official remedies, with their action and use, a fact which makes the book very valuable. Throughout the text the most important facts of each drug are brought out in heavy type or italics, so that the reader can pick them out without any difficulty. It is a well-arranged and accurate text-book, especially on therapeutics.

CURRENT LITERATURE REVIEWED.

IN CHARGE OF ELLISON J. MORRIS, M.D., AND SAMUEL M. WILSON, M.D.

IN THE PHYSICIAN AND SURGEON

for September appears a very interesting article on

Tyrotoxicon Poisoning,

by Dr. Luther S. Harvey.

In it he mentions the fact, not generally known, that cheese poisoning has been known for over one hundred years, and that the term tyrotoxicon was in use fifty years ago, at least.

Schmierkase and barschkase are said to be particularly apt to contain this poison on account of the manner in which they are prepared.

A very vivid record of two cases of poisoning has been found: "Two men made a breakfast of this same sort of cheese with bread and butter. One went immediately into the field and after a few hours noticed a heaviness of the head, anxiety and a painful feeling in the abdomen and pressure upon the chest. These symptoms became worse and were followed by dizziness and nausea. He was obliged to return to his home, where he was taken with severe vomiting and copious diarrhœa. After that the other symptoms disappeared and left only extreme weariness. The other man, who had breakfasted two hours later, came to dinner with tenderness in the abdomen and complained of dull pain and pressure in the head. With great difficulty he ate two plates of chicken soup, during which he turned alternately red and pale. Finally he rose from the table ashy pale, staggering into the front part of the house, where he fell upon the floor like a lifeless machine. He stretched out his hands and feet, his eyes being open, and from a large wound on the jaw caused by the fall came not a drop of blood. He was immediately raised from the floor; copious vomiting set in and the previously dry wound began to bleed. In this case diarrhœa did not occur and after the vomiting he experienced no unpleasant sequelæ."

Experimenting with poisonous cheese Vaughan found that a watery extract was poisonous, also an alcoholic extract.

In 1887 it was found that after treating an alcoholic solution of tyrotoxicon with platinic chloride, a violent explosion took place on evaporating it. Knowing that diazobenzol would under similar circumstances explode in the same manner, experiments were made with that substance, and it was found to be quite poisonous.

Diazobenzol is a transition putrefactive product. Hydrogen sulphide, heat, and exposure to the air destroy it, and this accounts for the difficulty in isolating it.

Vaughan claims that if the butyric acid ferment is prepared in the usual way, milk inoculated with it and allowed to stand for a few hours at the body temperature the poison will form. He is not prepared to say, though, that the cause of tyrotoxicon is the butyric ferment, but that it is usually present with it.

Dr. Harvey in testing some suspected cheese ate five grammes, and observing no effect, took two days later ten grammes, and suffered from vomiting and purging, apparently choleraic in severity, and recovered only after the free use of hypodermics of nitroglycerine, strychnia, and brandy together with paregoric, hot blankets, etc.

He concludes from this experience that scattered colonies of the microbes existed and the poison was intense in proximity to these.

Dr. J. R. Dodge reports a case of

Reflex Paralysis of the Organs of Phonation; Recovery.

The patient was a single girl of eighteen, who suddenly lost her power of speech. When seen there were no objective symptoms, and in spite of general, local and climatic treatment the condition remained unchanged. The patient married, and some time afterward—two years from the commencement of the trouble—was so frightened by some farm cattle that she screamed for help. Complete control and power over the voice remained from that time.

In an editorial on "Emotional Jaundice" several cases are cited where fright caused an intense and instantaneous jaundice. This he ascribes to a change in the relation between the blood pressure and the pressure in the biliary vessels. Normally, the biliary pressure is the greater. It is also known that the biliary vessels may occasionally contract.

Delayed jaundice following emotional excitement is probably due to an intervening digestive derangement.

Dr. David Inglis writes of the

Sequelæ of Diphtheria.

In diphtheria, he says, a poison similar to those formed in scarlet fever, rheumatism, measles, typhoid fever, small-pox, etc., is formed, and the after-effects of it lead to general destruction of the protoplasm with which it comes in contact and to the well-known sequelæ of diphtheria.

The kidneys are probably affected in almost every case, but to a less degree than in scarlet fever. The nervous symptoms are due to a multiple neuritis, but this differs from that due to alcohol, lead, etc., in being parenchymatous and not interstitial. It is, therefore, not followed by sclerosis, and when the regeneration takes place it is usually complete and is not apt to be followed by muscular atrophy.

When, however, the cells in the anterior spinal cornua are inflamed, a degeneration of the corresponding nerve-roots and an atrophy of the muscles supplied by these may result.

The oculo-motor and pharyngeal muscles are usually the first affected, and when visual defects follow they may usually be proven due simply to paralysis of the muscles of accommodation.

In this disease it is peculiar that symptoms may appear and progress in one part of the body, when cure is taking place elsewhere.

The danger in this poisoning lies in the probable paralysis of the cardiac and respiratory nerves. This may take place with scarcely any warning, hence the necessity of carefully observing the cardiac and respiratory rhythm and ordering absolute rest if there be the slightest irregularity.

The author records a case where the absence of symptoms in an indisposed child led to a complete examination, resulting in the discovery that palate, tonsils and pharynx were covered with the diphtheritic membrane.

The child seemed very slightly unwell, but died in eight hours.

Cod-liver oil and arsenic are preferred to galvanism; in fact, unless carefully used, galvanism is apt to retard rather than to help.

The diphtheritic poison may cause hemiplegia by degeneration of blood-vessel walls.

The very practical point is dwelt on that children should not be put to work nor study after a recent attack of diphtheria.

Other articles in this number are: "One Hundred Consecutive Obstetrical Cases," by Dr. W. S. Haughey; "The Importance of the Bacterium Coli, etc.," by Dr. Jules Simon; "The Pathology and Treatment of Diphtheria," by Dr. Collins H Johnston.

THE ANNALS OF GYNÆCOLOGY AND PÆDIATRY

for September. Dr. Ernest W. Cushing, Professor of Gynæcology at Tuft's College Medical School, contributes an interesting paper on

Abdominal Drainage.

The author compares the difference of practice among the English and German operators in respect to drainage after abdominal operations, and declares that the omission of drainage by the latter is based upon the use of a large incision and complete tying of all adhesions with catgut, and entire removal of all foreign matter from the abdomen without irrigation, the assistants being skilled, the preparations perfect, the operating-room ideal, the operator being a clinical professor of long experience and particular skill, and the patient being, on the average, robust and in good condition.

The reasons for employing drainage are stated to be the danger of a profuse sanguineous discharge, or even a serious hemorrhage, both of which the drainage-tube will carry off and in the case of severe hemorrhage will

give warning of the occurrence of the accident. The objections to the use of the tube are:

The use of a drainage-tube is a decided inconvenience.

If carelessly handled, it may become a source of secondary infection, with formation of exudates.

If incorrectly placed or left too long in position, it may fail of its purpose.

It may even, if wrongly used, be the origin of a fecal fistula, by pressure, or of a suppurating abdominal wound; or a sinus may remain in the track of the tube.

Its use greatly increases the necessity of skill and attention in the treatment, and adds to the discomfort of the patient for a day or two after the operation. By pressure on the intestine, unless removed in time, it may cause an obstruction even with fatal result.

The liability to subsequent hernia is said to be somewhat increased.

While the author fully recognizes the force of these objections, they are more theoretical than real in his opinion, and a fatal result from the use of the drainage-tube in competent hands is of extremely rare occurrence, and no such accident has occurred to him.

He gives the following indications for drainage:

1. The presence of freshly separated adhesions, or of voluminous pedicles, or of rents or incisions in the pelvic peritoneum which have required many stitches—in fact, of any condition which may lead to hemorrhage or to oozing of bloody fluid.

2. The fact that pus, or urine, or fecal matter, or the contents of cysts or much blood has escaped into the abdominal cavity, such a circumstance should always be followed by free irrigation with pure hot water and the use of drainage.

3. The perforation or incision of the intestine or bladder during operation, or a sloughy condition which makes it probable that perforation will occur. Even when an opening into these viscera found or made during the operation is carefully sutured, experience shows that patients often recover with a fecal or, as the case may be, a urinary fistula, who would presumably have died without drainage. Such fistulæ heal eventually under proper treatment.

4. The presence of masses of exudates, or of stiff walls of cavities from which diseased organs have been enucleated, which do not permit the intestines to snugly fill the pelvis and which would offer a cavity where fluid could accumulate.

5. Almost any condition, such as shock or weakness, which has required very rapid termination of a very difficult operation, in which case the abdomen will usually be full of hot water.

There are no special contraindications to drainage; the general considerations mentioned above prevent its use where it is not needed; but practically those operators who use the drainage-tube learn to trust in it, and where there is any doubt they drain.

A straight tube should be used because it is easier to clean, and sometimes it is important to turn it on its axis without removing it. It is also far easier to introduce and remove a strand of absorbent cotton or gauze through a straight tube than through a curved one, and often it is very desirable to turn the cotton-holding probe on its axis in order to wipe out the tube or to remove small clots of blood from the space of Douglas. The tube being straight should be well annealed, open at the lower extremity, and provided with a flange at or near the top. The lower two inches should be perforated with fine apertures, so small that the omentum or intestine cannot become entangled therein, and yet large enough to permit of the free passage of blood or secretions. The tube should be perfectly smooth inside and out. Cases that require drainage will usually require irrigation, which is best accomplished by pouring pure (distilled preferably) water into the abdominal cavity by means of a funnel and rubber tube with an end piece of glass or hard rubber having openings sufficiently large to permit of a free flow of water. Irrigation is to be continued till the fluid returned is clear or nearly so, making sure that opportunity is given for all clots to escape; then, without attempting to remove the water from the abdomen, the tube is to be carried to the bottom of the space of Douglas, and sometimes a second tube or a packing of gauze is required to drain some particular cavity with stiff walls. The abdominal wound is then to be closed around the tube, allowing the latter to project through that part of the wound where it will lie most easily. Excess of fluid may then be removed through a small rubber tube inserted through the glass drain, while a piece of thin rubber sheeting, or "dam," is stretched over the upper end of the tube, which projects through a small hole in the middle of the sheet and thus protects the dressings. The tube is to be kept empty by sucking the fluid out by means of a syringe with a long nozzle or one provided with a piece of tubing long enough to reach to the bottom of the tube. The author recommends that the tube be sucked dry every ten minutes after the operation, the interval being gradually increased. He also finds that it is not best to remove the glass drain under thirty-six hours after the operation, since the secretion sometimes diminishes after twelve hours, and then becomes quite free again during the period of reaction. When the glass drain is to be removed a rubber tube is introduced into it and the glass tube withdrawn, leaving the rubber tube in its place. A strip of iodoform gauze may be used in the same way. Whichever is used is shortened half an inch every morning, noon and night until it is all removed.

The author also describes the method of using the gauze drain of Miculicz, which in certain cases becomes necessary in addition to the glass drain. Particularly is this the case where there is free oozing from some points deep in the pelvis, or where it is desirable to prevent the intestines from falling into a cavity wholly or in part lined with a suppurating membrane, or where a perforation of the bladder or intestine has been

found or made, so that a fistula may reasonably be expected.

Drainage by the vagina receives little mention, as the author prefers to use drainage through the abdominal wound, while he concedes that it may be a useful procedure in cases of vaginal hysterectomy and sometimes in total extirpation of the uterus.

The same author also contributes a paper on

The Operative Treatment of Uterine Fibroids,

in which he sums up the results of his own experience as follows:

1. That electricity is useless and dangerous and has no place in the armamentarium of the surgeon.

2. That no method will compare with that of the extraperitoneal treatment of the stump in favorable cases—that is, where the abdominal walls are not too thick and the tumor can be lifted out so that a constrictor can be applied around the whole pedicle, including the uterine appendages; that the advantages of this method lie in its rapidity, in the short time during which the abdomen is opened, in the entire protection of the intestines from exposure and from handling, and in the absence of shock; that with proper care there need be no sloughing of the stump and little or no suppuration of the wound. This, then, for him is the operation of selection for the present, especially in private practice and in all cases where the patient is not strong and is ill prepared to withstand the shock of the longer operation required by other methods of treatment of the stump.

3. For the intra-extraperitoneal treatment he should always in future leave as little of the cervix as possible—dilate it, burn it, and drain it. This method is applicable to cases in which it is difficult to apply the former one, owing to the thickness of the abdominal walls, or rigidity of the pelvic floor, or the presence of dense adhesions requiring drainage. He sees little advantage to be gained from leaving any cervix; to avoid the great danger of sloughing of the stump, it must be amputated well below the level of the internal os after separation of the bladder from the cervix and ligation of the uterine arteries. When all of this has been done there is no difficulty or loss of time in removing all the uterine tissues. Drainage should usually be employed both through the vagina by gauze and by a glass tube at the bottom of the pelvis, as there is pretty sure to be free oozing.

The fact remains, however, and must never be forgotten, that for either of these methods of operation, by extra-intraperitoneal treatment or by total abdominal extirpation, the operation is prolonged from one-half an hour to an hour; during this time the pelvis is exposed to the air and too much handling; considerable blood may be lost, which runs in among the intestines; there is an added shock from the large amount of ether consumed, and the whole burden of proof is, in the author's judgment, still on those who would use these operations in cases which are suitable for the extraperitoneal treatment.

Dr. T. M. Burns, Instructor in Obstetrics at the Gross Medical College, Denver, Colo., etc., discusses "La Grippe During the Puerperal State," reporting several cases and presenting the various points by which the affection may be distinguished from puerperal sepsis.

Charles Greene Cumston, B.M.S., M.D., discusses "Sudden Death of Women from Placenta Prævia, with Remarks on Treatment." The author advises that the obstetrician keep on hand a quantity of sterilized tampons for use in such emergency. These tampons are saturated with iodol-glycerin, made in accordance with a formula given, and which he states may remain in the vagina for several days without giving any odor when withdrawn. Before introduction these are to be covered thinly with 8 per cent. carbolized vaseline, forming, when introduced, a sort of cement, which cannot be penetrated with blood. If the woman is in labor the tampons are to be used till dilatation is complete. The uterus must not be emptied too quickly and extraction of the fetus must be accomplished slowly.

Dr. Cumston also reports a clinical lecture delivered at the Charity Hospital, Paris, by Prof. Tilleaux on "Tuberculosis of the Rectum."

J. G. Carpenter, M.D., of Stanford, Ky., contributes an interesting paper on "Abdominal Surgery in the Country—Lives that could have been Saved by Early Surgical Interference," detailing a number of cases illustrating the conditions with which the surgeon has to contend in operating without the accessories considered absolutely essential in city practice.

A Clinical Study of the Effects of Inhalations of Chloroform and Ether Upon the Kidney.

Wunderlich (*Centralblatt fur Chirurgie*) has examined the urine of 100 cases of ether and chloroform narcosis. The urine was carefully examined berore and after, both microscopically and chemically. The investigations give the following results:

1. Those cases in which albumin is already present, the amount of albumin is markedly increased—that is, when ether is the anesthetic used.

2. Albumin is frequently seen after inhalations of chloroform, and seldom when ether is used.

This albuminuria usually disappears in from twenty-four to forty-eight hours.

3. When chloroform is used, casts are frequently found in the urine, but seldom after ether.

The course of the albumin and casts is, in the author's estimation, an ischemia of the kidney, or an increase in the blood-pressure.

The author, in conclusion, says the so called "ether nephritis" may be excluded from medical literature.—*University Med. Magazine.*

PERISCOPE.

IN CHARGE OF WM. E. PARKE, A.M., M.D.

MEDICINE.

The Diuretic Action of Diuretin.

Pawinski (*Zeitschrift fur klinische Medicin*) comes to the conclusion, from his observations, that diuretin does not act through its influence on the innervation of the heart, as does digitalis, but in an indirect manner. By an increase of the urine and diminution of the edema the work that the heart has to do is lessened, and hence its action made more of use to the economy.

The diuretic action of diuretin is often excessive, ten to twelve quarts being sometimes passed in twenty-four hours. The maximum action begins on the fourth or fifth day. The substance is indicated in heart disease, where digitalis fails to act or cannot be taken. He uses it in aortic regurgitations, where digitalis is sometimes badly borne, and in heart disease, where there is great irritability of the nervous system. Diuretin gives better results in heart disease where there is disease of the heart muscle than it does in valvular disease. In kidney disease it is of less value. It is most valuable, however, in high grades of intestinal nephritis, where there is high blood-pressure. Dose is about fifteen grains, ninety grains to be given daily. It is best given in solution.—*University Med. Magazine.*

Bismuth Subgallate or Digestive Ferments?

The present *furore* in favor of bismuth subgallate is likely to prove its worst enemy because its general use in all forms of indigestion will eventually create a reaction against it, causing it to fall into disuse. That the remedy is a useful one in certain forms of functional dyspepsia cannot be denied, but to be successful clinically the diet must be properly regulated, and with this proper precaution—although the writer has used the subgallate quite extensively during the past three months—the results have been but little, if any, more satisfactory than he has experienced with the same dose of bismuth subcarbonate.

Unfortunately, the profession has gotten into the habit of prescribing bismuth in the form of subnitrate instead of the subcarbonate, and the favorable results following the employment of the latter are not appreciable when the former is given. The reason for this is obvious, since the subcarbonate is an amorphous powder, while the subnitrate is a crystalline substance, and no matter what may be the amount of the dose it always enacts the *role* of an irritant. But even with the administration of subcarbonate, and the rule is equally applicable in the case of subgallate, one or the other of the digestive ferments should be added. In all cases the addition of either pepsin or pancreatin, or the simultaneous exhibition of malt extract, will materially enhance the bismuth effects, and we therefore submit this proposition to the profession in the firm belief that it will prevent much disappointment on the part of physicians and patients.

That bismuth preparations act as disinfectants in the alimentary canal is freely admitted, but that they stimulate or measurably improve the digestive function proper there is room for serious doubt, and it would be well, therefore, in estimating the therapeutics of the remedy to take into consideration the physical demands of the patient. With our superior pepsin preparations and the elegant pancreatic extracts now at our command, it seems the part of wisdom to consider the ultimate effects of indiscriminately prescribing the popular remedy of the day.

To give the present article a practical turn, the following formulæ are suggested as a marked improvement over the use of bismuth alone in the treatment of dyspepsia and indigestion:

℞
Ext. nucis vomicæ..... gr. ¼
Pepsin pur..... gr. i
Bismuthi subcarbonas, vel bismuthi subgallas..... gr. iv

M. Et fiat Tab. vel Chart. No. i.

SIG.—Take one tablet or powder before and after eating.

℞
Ext. nucis vomicæ..... gr. ¼
Ext. pancreatini..... gr. iss
Bismuthi subcarbonas, vel bismuthi subgallas..... gr. iijss

M. Et fiat Tab. vel Chart. No. i.

SIG.—Take one tablet or powder before, and one two hours after meals.

The first of these formulæ will be found available when the fault lies with the stomach, the second when intestinal digestion is deficient. In the former case the diet should be regulated with a view to lessen the work demanded of the stomach; in the latter the starchy food-stuffs and fats must be diminished, the diet being principally of a nitrogenous character.—*The American Therapist.*

The Ancient Use of Sterilized Water.

Mr. Morris F. Davey (*Abergavenny*) writes: The following from Ragozin's *Media, Babylon and Persia* is interesting: "As soon as Susa became the principal capital of the Persian Empire, its river, the Choaspes, had the honor of supplying the kings with the only

drinking-water they would use. Kyros first instituted this custom, which was religiously kept up by his successors. 'Whenever the great king travels,' Herodotus reports, 'he is attended by a number of four-wheeled cars drawn by mules, in which the Choaspes water, ready boiled for use and stored in flagons of silver, is moved with him from place to place.'" The author says in a foot-note, page 319, "It is amusing to find so early an instance of this hygienic precaution—the boiling of water—which we are wont to consider so very modern."—*Diet and Hygienic Gazette.*

Resorbine: A New Ointment Base.

Ledermann (*British Journal of Dermatology*) reported to the Berlin Dermatological Society a base which is capable of traversing the skin after moderate rubbing in and which leaves a slight covering layer. It is made with some difficulty after a patented method by emulsifying pure almond oil and a little wax with water and a small percentage of other innocent but necessary vehicles. Resorbine can be mixed with all vegetable and animal fats. It is especially advantageous to add a little lanolin. Its use is indicated in all the hyper and parakeratoses, as ichthyosis and pityriasis, and in scleroderma, in artificial dermatites, ulcerations, rhagades, scabies. It combines well with Neapolitan ointment. The price is about the same as that of lanolin. —*Therapeutic Gazette.*

Inebriety as a Disease.

Dr. R. M. Phelps thus concludes an analytical study of this subject in the *Medical News:*

Our conclusions, then, would be something as follows:

1. We should, for the sake of clearness, not mingle or use interchangeably the words inebriety and irresponsibility; but in the cases in which it can clearly be shown to exist, we should make inebriety mean the drinking and irresponsibility the insanity so produced.

2. Disease should not be carelessly used to mean predisposition, or neurosis; nor should it be used to mean a disease-symptom unless so specified. But when unqualified it should designate a fairly well-defined entity composed of a group of symptoms with known or presumed pathology and causation.

3. Inebriety (excessive drinking) can then be stated to be not a disease, but as tending to produce various diseased conditions.

These conditions are quite general in character, but most notably seen in nerve-failure and brain-failure.

4. The predisposition varies in different persons and constitutes a temptation.

5. Irresponsibility is of varying grade, and the law does not necessarily follow these grades, but adjudges penalty, first, by the consequences of the act, and, secondly, for the safety of society.

6. In our opinion none of the early degrees of inebriety, as a rule, produces sufficient effect to be named disease or irresponsibility. This being true, even if there be a growing mental impairment, we would call the mental state insanity only when it would be so called if induced by other causative conditions.

Insanity as a disease is also subject to this same rule. The name is not applied to all mental changes, but only to those which have a considerable definition. Multitudes of mental impairments are not called insanity at all.—*Ohio Medical Journal.*

The Oxytocic Action of Salicylic Acid and Its Compound with Sodium.

Vineberg concludes an article on this subject as follows:

1. Salicylic acid and its compounds may be found useful in scanty and delayed menstruation.

2. They should not be administered to pregnant women who have a predisposition to abort or who suffer from menorrhagia and metrorrhagia.

3. Their administration should be watched carefully in all cases of pregnancy, and on the appearance of any "show," or anything resembling labor-pains, they should be discontinued.—*New York Medical Journal.*

The Production of Disease by Sewer Air.

Dr. A. Jacobi, of New York, in New York *Med. Jour.*, has lengthy and timely articles on the above subject. He shows that a sewer is not a good breeding-place for pathogenic germs. There is a deficiency of oxygen, an excess of carbonic acid, and many saprophytic germs. These conditions are opposed to the growth and multiplication of pathogenic germs. He further shows that scarlatina, diphtheria, pertussis and diarrhœal diseases have not been lessened in frequency nor in malignancy, by improved sewers. Further, the author does not think that disease germs are likely to be carried in sewer air. They are heavier than the air, and not likely to float in it. In order to float, these germs must be carried by dust. This is not what happens in the case of sewer gas. Dr. Jacobi thinks that putrefaction destroys pathogenous germs. He is also of the opinion that emotion and sentiment, rather than logic and science, have been ruling in this matter of infection by sewer gas. The atmosphere may contain both living and dead germs. They are frequently found in places that are infected; but are not as abundant in sewer air as in that of houses and school-rooms. Moist surfaces, such as the contents of sewers and sewer walls, do not give off germs into the air, unless when splashed, and then they are only carried by the sewer gas for a short time. Sewer gas may be very offensive and irritating, and in this way cause sore throats and catarrhal troubles. As the diphtheria germ is very ubiquitous, it may find a ready

nidus in this way. Putrefaction destroys specific germs. The more offensive the sewer air, the less likely would it be to contain the germs of diphtheria. The germs of typhoid fever and dysentery are not so readily destroyed by putrefaction. These diseases may arise from the exhalations from cesspools, etc., but very seldom come from sewer air. It is therefore the chemical poisons and not the germs that are to be guarded against in the drainage of houses and streets. —*Dominion Med. Monthly.*

Diagnosis of Habitual Headaches of Nasal Origin.

Dr. J. Scheinmann, of Berlin, claims that habitual headache very frequently is of nasal origin. Even in neurasthenia and hysteria he says that headache may be only due to some local nasal affection, and not be a single symptom of the total symptom complex. Grave diseases of the nasal cavities and their appendages may exist for a long time without the patient noticing them, while his headache is terrific, and only by the nasal symptoms becoming more distinct is the attention of the physician called to the true source. Neurasthenics are more easily affected than healthy subjects by these nasal irritations; often their headache is of local origin, and they will be frequently relieved by appropriate local treatment. Most patients with swelling of the mucous membrane of the turbinated bones suffer from more or less headache, and hence, where no known cause can be discovered in a case of headache, he advises examination of the nose, in hysterics and neurasthenics as well. Polypi are also a cause. The pain originates at the root of the nose, and radiates into the eye or the temple, or there is a constant dull pressure over the root of the nose, which often is associated with dull headache. Especially in cases of catarrh, with hypertrophy of the mucous membrane of the turbinated bones, is there a distinct listlessness and inability or loss of desire for mental exertion. Empyema of the maxillary is often accompanied by headache on the corresponding side, and at the root of the nose. There is a constant sensation of pressure at the root of the nose, and often severe neuralgic pains in the frontal region.—*Berliner klinische Wochenschrift—New York Med. Times.*

Treatment of Diabetes with Fluid Extract of Jambul E Cortice.

Dr. Lenne (*Therapeutische Monatshefte*), who had previously reported encouraging results from the use of powder prepared from the fruit of *Syzygium Jambolanum*, has now tried the fluid extract of the bark, according to the method proposed by Vix. Fifteen grains were given in water three times a day from one to two hours after meals.

On February 14th to 15th the patient passed 4,250 cubic centimeters urine, specific gravity 1034, containing a trace of albumin; 5.1 per cent. sugar (216.75 grammes); 3.1 per cent. urea (131.75 grammes); large amount of acetic acid.

Under treatment the patient's weight increased from 43.950 kilogrammes to 45.300 kilogrammes on March 17th. The volume of urine at that time was 3,000 cubic centimeters; the specific gravity, 1031; the percentage of sugar, 8.6 (108 grammes); the percentage of urea, 2.6 (78 grammes). The diminution in the amount of sugar was, however, not constant, reaching as high as 5.3 per cent. on February 22d and again 4.5 per cent. on March 16th. Lenne concludes justly that not the slightest influence of the agent upon metabolism can be recognized. For his part, he thinks that the fluid extract from the bark exerts just as little influence upon the sugar-excreting process of diabetes as does the powdered fruit.—*Therapeutic Gazette.*

A New Treatment of Pulmonary Tuberculosis.

Dr. Cohn, of Hamburg, has found ichthyol very useful in the treatment of pulmonary tuberculosis. He administers the drug in the following form:

℞ Ichthyolis..... } of each, 5 drachms. M.
Aq. destill..... }

The patient begins to take 4 drops of this solution thrice daily, and then the dose is increased by 1 drop daily until the maximum amount of 40 drops three times a day is reached. The best time of administration is before meals. Generally speaking, patients become readily accustomed to the disagreeable taste of ichthyol, but a mouthful or two of black coffee is very efficacious in removing the taste. The ichthyol is said to be very far superior to creasote or cod-liver oil.—*Medical Press and Circular.*

The Treatment of Jaundice.

Dr. M. Alivia, of Viterbo, read a paper before the International Congress on this subject, of which the following were the conclusions:

1. Long-continued biliary stasis, comprising the secreting cells of the parenchyma of the liver and producing a certain anemia of the organ, markedly reduces, and sometimes suppresses, the secretion of the biliary acids. The gravity of the phenomena described under the name of biliary intoxication does not, therefore, depend upon the action of these acids.

2. The scarcity or absence of bile in the intestinal canal modifies very seriously the chemical processes there taking place.

3. One of the most common of the gastric changes in icterus is the suppression of hydrochloric acid secretion.

4. There is little or no loss of carbonate of sodium in these cases.

5. The reaction of the contents of the stomach is usually alkaline, less often neutral or faintly acid.

6. The physiological activity of the bile and of the pancreatic juice in the intestine is retarded.

7. The chlorides in the urine are increased, the reaction of the fluid is often alkaline, there is diminution of urea with an abundance of products of the aromatic series.

8. The more marked are these characters so much the more grave are the disease and its clinical manifestations.

9. Alkaline treatment does not modify these conditions. The effect of the acid treatment is, however, to diminish the chlorides, to restore the normal acidity of urinary reaction, to increase the excretion of urea, and to reduce that of the aromatic products; at the same time there is a progressive increase in the weight of the body.—*N. Y. Med. Record.*

Clinical Studies as to the Influence of Chloroform Inhalation Upon the Kidneys.

Rindskopf (*Centralblatt fur Chirurgie*) gives a report of ninety-three cases of chloroform narcosis. In thirty-one cases, albumin, casts, leucocytes, epithelial cells were found in the urine. In the majority of cases the urine clears up after seventy-two hours. The quantity of chloroform administered greatly influences the character of the urine; chloroform should be given drop by drop continuously.

No case should be repeatedly chloroformed every three or four days, as the kidneys will not have had sufficient time to recover.—*University Med. Magazine.*

Causes of Sexual Debility.

Dr. F. R. Sturgis gives the following summary of his views at the termination of a very instructive paper: 1. That the cases of sexual debility which are marked by imperfect erections and by premature emissions are usually, if not entirely, due to hyperæsthesia of some portion of the urethra. 2. That masturbation has very little, if anything, to do with it, beyond the fact that if indulged in to excess it may induce a tendency toward this hyperæsthetic condition, but this is no more marked in masturbators than it is in those persons who indulge to excess in the venereal act. 3. That organic stricture has little, if anything, to do with it; but that associated with this hyperæsthetic condition there is an irritable condition of the canal which produces spasmodic contractions of the urethra upon attempts to pass instruments, oftentimes during the first act of micturition and at the time of connection. 4. That varicocele plays no unimportant part in these cases. 5. That neuralgia of the testis, if a cause of this disease, induces it merely as a secondary consequence to the pain, which is one of the distinguishing features of this disease. 6. That tuberculosis, syphilis and gonorrhœa may also play their part, and should all be reckoned with in summing up the causes which may induce this peculiar and depressing condition of affairs.—*Gaillard's Med. Journ.*

Treatment of Epithelioma.

Darier (*La Medecine Moderne*) has obtained excellent results with the following dressing: First dry the ulcerated surface, then cauterize with any cautery—thermo-cautery, galvano-cautery, or, still better, chromic acid—and finally use a solution of 1 to 100 of methyl-blue, either in repeated painting or in interstitial injections. Recovery often follows at the end of one or two months. Abadie, from personal observation, believes that the chromic acid is unnecessary, and that the methyl-blue alone is effective. He points out that the improvement is often exceedingly slow, and months may pass without appreciable change, and this probably accounts for the fact that it has been abandoned by many practitioners.—*Therapeutic Gazette.*

A New Hospital Invention.

A new invention called the thermogen is now being tried in several of the English hospitals with marked success. The object is to sustain the heat at a uniform temperature when artificial means are required, and of course its use would be limited to hospitals or institutions where the necessary facilities are easily obtainable. The thermogen consists of a light quilt containing a coil of wire bent in the form of a gridiron, inclosed in insulating and non-conducting material, and imbedded in cotton, wool or other soft substance, with a silk or woolen covering. The heat is produced by the resistance of the coil to the flow through it of the electric current. A uniform temperature of about 150° can be maintained for any length of time, the heat being prevented from going above that by the melting of a fuse which instantly shuts off the current. In those houses lighted by electricity the quilt can be connected with the ordinary incandescent terminals, but the principal use of the quilt would be confined mostly to hospitals, during lengthened operations, or in those attended with hemorrhage. —*N. Y. Med. Times.*

To Abort Syphilis.

Bichloride of mercury (10 grs. to ʒj) painted on a chancre as soon as it appears, kills all specific germs, and there will be no systematic manifestation. Then you only have a local sore to heal. So says the *Medical Summary.*

Vomiting of Pregnancy.

A writer in the *Lancet* says: "I have not failed once for many years, by a single vesication over the fourth and fifth dorsal vertebræ, to put an end at once to the sickness of pregnancy for the whole remaining period of gestation, no matter at what stage I was consulted. The neuralgic toothache, and pruritis pudendi of the puerperal condition yielded as readily, and to one application."

Diabetes.

Unschuld (*Berl. klin. Woch.*) draws attention to some of the less noticed symptoms in early diabetes. He quotes a number of illustrative cases in which the disease was masked by the presence of dyspeptic symptoms, nervous symptoms classed as neurasthenia, etc. Sometimes diabetes may quite accidentally be discovered. Here marked thirst and abundant urine were mostly absent. Frequently cramp in the calves is complained of, a symptom at present but little recognized. During the past eight years the author has found it in as many as 26 per cent. of his cases. In 1891 he found it 33 times among 109 cases. It most often occurs in the morning, but sometimes at night. If such cramps occur and the patient complains of weariness and weakness, the urine should be at once examined for sugar. These cramps may be present in all forms of diabetes, except in the acute disease occurring in young subjects. Massage and attempts at walking generally relieve the cramp. The cause is obscure; perhaps it is due to the diabetic toxins. The recognition of these cramps may lead to the early diagnosis of diabetes.—*British Med. Jour.*

SURGERY.

Compression of the Mammary Glands.

Verneuil (*Bull. et Mem. de la Soc. de Chir. de Paris*) advocates compression of the breast not only in cases of inflammation but also in cystic tumor. He has devised very light stays, made of perforated leather and laced behind. The pressure is easier to apply, more uniform, and more constant than when bandages are used. The patient herself places layers of wool, gradually increased in thickness, between the breast and the apparatus. Verneuil insists that operation is rarely needed in cystic disease of the breasts. He has treated by alkalies, arsenic, and compression two patients who had undergone amputation of one breast, and asked him to remove its fellow. In both cases the remaining breast was cured. He also cured by compression a bad case of hypertrophy of the breasts in a girl of eighteen, where amputation had been proposed.—*British Med. Jour.*

Immediate Repair to Injuries of the Pelvic Floor.

Dr. George M. Boyd reports in the New York *Journal of Obstetrics and Gynecology* 721 cases of completed labor with 117 injuries of the pelvic floor, and in some of these cases, fearing rupture in the perineum or elsewhere, he has been ready to operate and in most of them he operated at once. His conclusions are:

1. As every obstetrical case is greatly a mathematical problem, so is the safety of the pelvic floor; if the passenger is too large for the passageway (something must give), a tear, either vaginal or perineal, will follow.

2. As it is our duty to study all obstetrical cases before labor by palpation and pelvimetry, just as much is it our duty to examine the perineum and vagina after labor.

3. That having any injury to the pelvic floor, it should be at once repaired, and a good method to follow is to perform the operation under constant irrigation, using sterilized Chinese silk for sutures, and avoiding infection of wound by placing the stitches without inserting the finger in the rectum.—*Maryland Med. Jour.*

The Significance of Anuria After Surgical Operations.

We not infrequently hear it said that the case would have done superbly after operation "had not suppression of the urine" set in and cut off life.

This assumption in the vast majority of cases rests on a fallacious foundation, without a shadow of proof to sustain it. Cause is confounded with effect. A capital operation has been performed, a limb has been amputated or a serous cavity opened.

Profound mental shock follows, or acute surgical fever succeeds, the heart's action is tumultuous, the pulse becomes thready and excretion of the urine ceases. This latter phenomenon is always one of serious omen under these circumstances, not because it implies that any pathological changes whatever have seized on the secreting elements of the kidney, but that peripheral death has commenced. The blood-current steadily diminishes in volume; the secretory glands cease to act through want of circulatory supply.

We will observe for some time before the end comes that the lachrymal glands are deficient in action, so that the orbital conjunctiva and cornea become dry and hazy, the tip of the tongue is cool and the mouth dry.

No! suppression of the urine is rarely if ever *per se* a post-operative cause of death. It is simply an evidence of vascular stasis, following on a sinking of the vital powers—a consequence and nothing more.

This term, together with the more modern meaningless makeshift, "heart-failure," should go in the same category, for they both serve as an excuse and cloak for ignorance and nothing more.—*Editorial in Times and Register.*

Indications for Tracheotomy.

Cnopf (*Munch. Med. Woch.*) says that when membrane is present in the larynx two factors have to be reckoned with: (1) Irritation of the respiratory centers and (2) narrowing of the larynx. Since the upper lobes of the lungs are under favorable conditions as regards inspiration, and the lower lobes as regards expiration, distention occurs in the former, atalectasis in the latter. The author's observations extend over 130 cases of laryngeal obstruction in children. On admission the position of the diaphragm was marked out on the chest behind and subsequent variations noted. In 67 cases the diaphragm stood at the tenth rib in 3 cases, at the eleventh in 13, under the eleventh in 13, and at the twelfth in 38. The deepest position of

the diaphragm was thus observed in a majority of cases, and this at all ages. In 112 out of 126 the deep position was noted by the third day, and usually it was present on admission. In tracheotomized cases carefully observed the position of the diaphragm was rapidly raised one space in 12 cases and two spaces in 13. In only 4 cases did the diaphragm remain at the same level after tracheotomy. The position of the diaphragm is thus a measure of the laryngeal stenosis. The question of vesicular breathing and of the pulse must be considered, but with the arrival of the diaphragm at its deepest position the time for tracheotomy has come.—*British Medical Journal.*

HYGIENE.

Poisons on Fruit.

There has been much discussion of late concerning the danger of poisoning from eating fruit which has been sprayed with salts of copper or arsenic to destroy insects or fungi upon the plant.

It is stated that experiments have been carried on for two years at the Michigan Agricultural College with a view of finding out the truth in the matter.

The important question is: Do the poisons penetrate the skin of the fruit? The tests have shown that copper sulphate has passed into the body of the pear, though more of the solution remained upon the skin. If this peel is not a protection, what can be said of the thinner skins, like those of the plum, the cherry, berries, etc? Dr. Kedzie, who made the analyses, says that horticulturists often use much larger quantities of the poisonous solutions than are necessary to destroy the life of the fungi; one-half or even a third of the quantity generally used would be enough.

It is not safe to eat fruit which has been sprayed with any poisonous salts, for while the poison received into the system from one pound might not be harmful, if no more were taken, repeating the dose may in time result in slow poisoning.

And how are people in the cities to know whether or not their fruit has been sprayed?—*Sanitarian.*

PHYSIOLOGY.

The Migration of the Ovum to the Tube.

Lode, *Archiv fur Gynakologie*, has investigated this interesting subject by a series of experiments upon guinea-pigs. In one experiment he injected fine coal particles into the peritoneal cavity. The animal was killed thirty-six hours afterward and the coal particles were detected in both tubes. In a guinea-pig four months old, in which the sexual organs were not yet fully devoloped, the particles were found only in the fimbria. In another series of experiments he used the ova of the ascaris lumbricoides, as they were larger than the coal particles. The injections were made in the same way into the peritoneal cavity. The examinations of the guinea-pigs killed within a variable period of between thirty-six hours to seven days showed the presence of the ova in large numbers in about the middle portion of the tubes. In a few instances the ova had become glued together, forming a round mass fully the size of the natural ovum of the guinea pig. This was found in the same situation in the tubal canal. The author draws the following conclusions from his investigations:

1. The cilia of the tube of a guinea-pig have the power of setting into motion bodies the size of the ovum of the guinea-pig, providing that the animal has arrived at sexual maturity.
2. The tube is enabled to take up ova not only from the ovary, but also from the free peritoneal cavity. Hence the old theory may be discarded that it is necessary for the tube to be applied to the ovary in order to engage the ovum within its canal. The theory of transmigration—that is, the passage of the ovum from one ovary to the tube on the opposite side—receives new proof by the foregoing experiments.
3. The migration of the ovum is independent of the menstrual period, as none of the animals experimented upon showed any signs of rut, either while alive or at the *post mortem.*
4. The migration is not dependent upon coitus.
5. The ovum travels along the first part of the tube much more rapidly than along the remaining part of the tube.

Lode attributes but a small role in the propulsion of the ovum to the peristaltic movements of the tube.—*Archives of Gynæcology Obstet. and Pediatrics.*

The Use of Ice in Asthma.

Dr. Sangree has succeeded in cutting short a spasm in a severe attack of bronchial asthma by applying ice over the course of the pneumogastric nerve at the root of the neck. Five minutes after the application the spasm relaxed completely, and the patient slept, after having been four days without sleep.—*Bul. Gen. de Therapeut.*

ARMY AND NAVY.

CHANGES IN THE U. S. ARMY FROM OCTOBER 14, 1894, TO OCTOBER 20, 1894.

Leave of absence for one month, with permission to apply to the proper authority for an extension of one month, is granted Captain Eugene L. Swift, Assistant Surgeon, Fort Yates, N. D.

By direction of the Acting Secretary of War, so much of paragraph 1, S.O. 233, A.G.O., October 4, 1894, as directs First Lieutenant Isaac P. Wane, Assistant Surgeon, to report to the commanding officer Camp Eagle Pass, Texas, after his relief from duty at Fort Supply, is so amended as to direct him to report in person to the commanding officer Fort Clark, Texas, for duty at that post.

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ORIGINAL ARTICLES.

THE CHEMICAL RELATIONS OF THE STOMACH CONTENTS DURING NORMAL DIGESTION.

DR. F. PENZOLDT.*

(*Deutsches Archiv fur klinische Medicin*, Sept. 14, 1894.) Condensed translation by A. L. BENEDICT, A.M., M.D.,† Buffalo, N. Y.

TRANSLATOR'S NOTE.

For the sake of abbreviating an article of twenty-six closely printed pages, the valuable series of experiments collected by Dr. Penzoldt have been rearranged, briefly described once and thereafter referred to by number. The expressions, "emptying of stomach," "close of digestion," etc., refer always to the completion of gastric digestion by the passage of food through the pylorus. Any statement that may seem ambiguous will, I believe, be explained by reference to the general heading. For example, *free acid* under A signifies free hydrochloric acid; *reaction* or *test* under C means the copper reduction test for sugar. Much under the headings B, C and D will be unintelligible without referring back to the particulars of the tests given under A and designated always by the same number. "P. C." means *post cibum*—after the meal. It must be remembered that this article deals only with normal digestion. Except some obvious deductions, nothing of importance has been sacrificed in the translation, despite the condensation. A. L. B.

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A.—TIME OF APPEARANCE OF FREE HYDROCHLORIC ACID IN GASTRIC DIGESTION.

(1) Gigglberger's experiments with 200–250 grams of meat.

Brain and calves' thymus, 1 hour P. C.; average continuance of test, 2 hours, 50 minutes (3 cases).

Pigeons and chickens, 2 hours P. C.

Calves' feet, partridge, roast beef, beefsteak, lamb, hare, beef tongue, 3 hours P. C.; average continuance of test, 3 hours, 50 minutes (12 cases).

Sliced raw ham, 3 hours P. C.; test slight or wanting.

(2) Experiments of assistants of Penzoldt with 250 grams of beefsteak (22 experiments).

In 20 cases free acid first appeared between 2 and 3 hours P. C.

In one case free acid first appeared 1½ hours P. C.

In one case free acid first appeared 2½ hours P. C., then disappeared till 4½ hours P. C.

In this series the average duration of the free acidity was 1¼ or 1½ hours, the minimum (each of two cases) being ½ hour, the maximum (one case) 2¼ hours. The free acidity persisted till the emptying of the stomach in five cases, till ¼ hour before this time in nine cases, till ½ hour before this time in four cases. In two cases the acidity disappeared an hour before the close of gastric digestion and in two ¾ hour before. Thus, on the aver-

age, the free acidity persisted till 20 minutes before the emptying of the stomach.

(3) Prager's twelve experiments with 100 grams of meat.

Beef sausage, warm roast fowl, 1 hour P. C.
Cold beefsteak, 1½ hours P. C.
Rare, warm broiled steak, raw and cooked ham, bacon, 1½ hours P. C.

In all these cases, the free acidity persisted till the close of digestion, the duration of acidity being in eight cases, 1¼ hours; in two cases, 1¾ hours; in one case, 1 hour; in one case, 2½ hours. Thus the total duration of gastric digestion was in most cases about 2½ hours.

(4) Hensel's experiments with roast beef to determine the delay of free acidity by increasing the quantity of food.

100	grams,	free	acid	appeared	1 hour	P. C.
200	"	"	"	" 4–4½	"	"
250	"	"	"	" 5½	"	"
300	"	"	"	" 6	"	"

(5) Walther's 16 experiments with 200 grams of fish; average time of digestion for the whole series, 3½ hours.

11 cases, free acid appeared 1 hour P.C.
2 cases, " " " 2 " "
1 case (salt herring), no free acidity.
2 cases (carp and bloater), acidity only temporary.

The acid, having once appeared, remained for 2–2½ hours, except as stated above.

(6) Five other similar experiments by Walther. Free acidity occurred at an average of 2 hours P. C. and lasted for a brief period. In another case it was entirely absent.

(7) Prager's seven experiments with 100 grams of egg, stomach contents expressed ½ hour P.C. and every quarter hour thereafter.

No free acid found till 1 hour P. C.; it then persisted till ¼ hour before the close of digestion; digestion occupying 1½–3 hours.

(8) Croce's 20 investigations with 150 grams of vegetable food, the first test being made 1–1½ hours P. C.

Albert biscuits, acidity lacking 1 hour 25 min. P. C., present 1 hour 55 min. P. C.

Stewed peas, acidity lacking 1¼, 1¾, 2¼ hours P. C., present 2¾ P. C. Total duration of digestion, 4 hours 5 min.

Stewed lentils, acidity lacking 2 hours 5 min. P. C., present (weak) 2 hours 35 min. P. C., present (strong) 3 hours 10 min. P. C. Total duration of digestion, 4 hours 15 min.

Green beans (no statement as to acidity) required over four hours for digestion. Other vegetables required less than four hours.

(9) Prager's 14 experiments with 100 grams of different breadstuffs. Free acid was always found 1 hour P. C., and it persisted till ¼ hour before the close of digestion. It was not examined for before 1 hour P. C.

(10) Twenty-five experiments by six investigators, using 70 grams of wheat roll and 200 grams of tea.

Free acid always found 1 hour P. C. In two cases only was an earlier test made, when it was found ¾ hour P. C. In all cases it persisted nearly or quite to the close of digestion.

(10[1]) Langguth's three experiments with 70 grams of white bread. Free acid found ¼ hour P. C.

(11) Hensel's five experiments with 70 grams white bread.

5	minutes	P. C.	no	acidity			
20	"	"	"	"	in	2	cases
20	"	"	weak	"	"	3	"
35	"	"	no	"	"	1	"
35	"	"	weak	"	"	1	"
35	"	"	marked	"	"	3	"
50	"	"	"	"	"	5	"

(12) Six similar experiments by Prager. Acidity found 40–55 minutes P. C.

(13) Hensel's experiments with different amounts of dry Albert biscuit [cf. (4)].

50	grams	free	acidity	1½	hours	P. C.
100	"	"	"	1½	"	"
150	"	"	"	2	"	"
200	"	"	"	2½–3	"	"

In all cases, the acidity persisted till ¼ hour before the close of digestion.

(14) Hensel's experiments with Albert biscuit and 200 grams of water [cf. (13)].

50	grams	Albert	biscuit,	acidity	¾	hour	P. C.
200	"	"	"	"	2½	"	"

These experiments showed that the addition of water hastened the appearance of free hydrochloric acid half an hour.

(15) Prager's experiments with 200 c.c. of liquids, tests made every quarter of an hour.

Water charged with CO_2, acidity appears ¼ hour P. C., lasting till ¼ hour before emptying of stomach into intestine, which occurred 1–1½ hours P. C.

Tea and black coffee.....	acidity	appears	¼	hr.	P. C.
Watery preparation of cocoa	"	"	1	"	"
Coffee with 5 c.c. cream.....	"	"	1	"	"
Cocoa with milk.....	"	"	1½	"	"
Milk (first investigation ½ hr. P. C.), 7 out of 9 cases.....	"	"	½	"	"
Milk (first investigation ½ hr. P. C.), 2 out of 9 cases.....	"	"	¾	"	"

In the above list the stomach emptied

itself 1½–2½ hours P. C., the acidity persisting till just before this time.

Leube-Rosenthal peptone solution	acidity appears	¼–½	hr. P. C.
Bouillon, Valentine's meat juice, Kemmerich's peptone, Dennayer's "	"	½–¾	" "
Liebig's extract, Weyl's casein-peptone, Pool's gluten-peptone	"	1–1¼	" "
Sparkling and Moselle wines	"	¼	" "
	"	¼	" "
Beer, pfalzer, Rhine wine, Ofner	"	½	" " (trace) (marked)
Sweet wines, Malaga, Marseilles	"	¾	" "

In this whole series the acidity persisted till just before the emptying of the stomach.

(16) Krieger's experiments with 500 c.c. of liquids.

Water, CO_2 water, syrup, clear tea, coffee, cocoa, with or without sugar, acidity appears ¼–½ hour P. C., and persists till the emptying of the stomach, 1–1½ hours P. C.

Cocoa, with milk, free acidity ¾ hour P. C.

Milk, no free acidity; stomach emptied itself 1 hour P. C.

Sour milk, free hydrochloric acid 1¼ hours P. C.; stomach emptied itself 2 hours P. C.

Beer, white wine, free acidity ½ hour P. C.

Red wine, free acidity ¾ hour P. C.

Beer and wines left the stomach 1½–1¾ hours P. C.

(17) Hensel's experiments with different quantities of liquids [cf. (4) and (13)].

100 c.c. milk	free acidity	½	hour P. C.
200–300 "	"	1	" "
400–500 "	"	1½	" "
500 c.c. beer	"	½	" "

(Same as for smaller quantities, but weaker.)

500 c.c. water ..... free acidity ¼ hour P. C.

(Same as in (15) and (16).)

B.—ALBUMIN AND PEPTONE REACTIONS IN GASTRIC DIGESTION.

Albumin determined by acetic acid on potassium ferrocyanide. Peptone by biuret reaction with alkaline solution of cupric sulphate. The numbers in parentheses refer mainly to the same experiments as in A.

(1) No tests made before 1 hour P. C. Brain and calves' thymus (3 experiments), little or no albumin. Poultry, roasts, beefsteak, ham, etc. (10 experiments), albumin marked 1 and 2 hours P. C., weak or negative between 3 and 4 hours P. C.; peptone about the same, any difference being in the slightly greater persistence of peptone.

(2) Variable results in 5 cases. In 11 albumin was pretty constantly present 1–2 hours P. C., disappearing toward the close of digestion, which was completed after 4 hours or more.

(3) In three cases albumin was slight or absent 1 hour P.C. (not examined for earlier). In eight experiments the albumin test was positive 1 and 2 hours P.C., weak or negative between 3 and 4 hours P.C.

(18) Two experiments of Langguth with beefsteak showed a weak test for albumin ½ hour P. C., which later became plain but never marked. Peptone was present earlier than albumin.

(5) Albumin was apparent 1 hour P. C., weak 2 hours P.C., afterward was present only in traces if at all. Peptone was present till shortly before the emptying of the stomach. In three experiments with shell-fish, codfish and eels, the peptone test was weak in the second hour.

(7) Albumin was present from ½ to 1 or 1½ hours P. C. The precipitate was never heavy and after 1½ hours was a mere trace or altogether absent. Peptone, same as albumin.

(15) In this group of experiments were thirteen with 200 c.c. of milk (raw, boiled and sterilized). In three (including two with sterilized milk) albumin was not found in any of the quarter-hour tests. In ten cases albumin was found ½ and ¾ hour P. C., afterward it was absent. Peptone was present ½ and ¾ hour P. C., weakening after one hour P. C., entirely absent toward the close of digestion.

(19) Twenty-four reliable experiments of Croce with about 200 grams of vegetable food.

Apples, cherries, cucumbers, turnips, cauliflower salad; albumin never found.

Lentils, spinach, "rape-cabbage," beans, radishes, tapioca, asparagus, some preparations of potato and some breadstuffs; albumin sometimes weak, sometimes absent.

Cakes, rice, cauliflower greens; albumin marked in the beginning, then disappearing.

Stewed peas; albumin as well as peptone weak in the beginning, then very marked.

Peptone was always lacking after apples, cherries and radishes. Note the discrepancy with the albumin reactions. Peptone was weak or absent with asparagus and "potato-vegetables." Peptone was apparent early, later disappearing, with white bread, "potato-fritters," rice, spin-

ach, "rape-cabbage," beans, turnips, cauliflower greens. It was always apparent after taking cakes, "groat-bread," stewed potatoes, lentils, asparagus salad, cauliflower, tapioca.

(12) Albumin was present in the greater half of digestion, absent in the shorter latter stage. Peptone was present from one hour P. C. almost to the close of digestion. (Thirteen experiments are referred to here, instead of six.)

(10) Albumin usually found 1 hour P. C., persisting till 1½ or 2 hours P. C., exceptionally till the end of digestion. Peptone was present as in (12).

(10[1]) Albumin distinct ¼ hour P. C., weak after ¾ or 1 hour P. C. Peptone weak but apparent ¼ hour P. C.

(13) No difference was found in the relation of albumin to the amount of food taken, except that with milk the test which was entirely absent for small quantities became apparent with larger quantities (cf. (15) B). The duration of the peptone test varied directly as the quantity of food for meat, milk and cakes.

100 grams meat, peptone test persisting till 2 or 3 hours P. C.; average duration of digestion 3½ hours.

300 grams meat, peptone test persisting till 6½ hours P. C.; average duration of digestion 7½ hours.

C.—THE GLUCOSE REACTION.

Both Tremmer's test and the ordinary application of the alkaline solution of cupric sulphate were used. These reactions always failed in substances free from starch and sugar. In all 107 experiments were made.

(19) Stewed potatoes, potato cakes, peas, lentils, tapioca, black bread, cherries; sugar present throughout digestion.

"Potato vegetables," rice, spinach, "rape-cabbage," cakes; marked test early, less or none toward the end of digestion.

Cauliflower greens, yellow turnips, test weak or negative.

With all the foregoing except cherries starch was shown by the iodine and potassium iodide solution to be present.

Asparagus (3 experiments), cauliflower (2 experiments), beans, cucumber salad, radishes, apples, sugar test negative.

(9) Sugar always present at the end of one hour (not examined for earlier), disappearing on the average ¾ hour before the end of digestion (minimum ¼ hour, maximum 1¼ hours before the end of digestion).

(10) Kauderitz *et al.* with 70 grams of white bread and tea. The sugar disappeared, on the average, ½–¾ hour before the emptying of the stomach.

(10[1]) Sugar always present as early as ¼ hour P. C., becoming much less after 1 hour P. C.

(13) The more breadstuff was taken the longer the sugar remained, but it usually disappeared 1 hour before the close of digestion.

50	grams	cakes	negative	after	1¼	hours	P. C.
100	"	"	"	"	2¼	"	"
200	"	"	"	"	3	"	"

The sugar test was weaker and less persistent if 200 grams of water were taken with the cakes [cf. (14) A].

D.—THE UNRELIABILITY OF UFFELMANN'S TEST FOR LACTIC ACID.

A dilute solution is made of ferric chlorid and carbolic acid. This has the color of amethyst. Lactic acid and lactates change it to a greenish-yellow.

Penzoldt says that the reaction is interfered with by hydrochloric and lactic acid, and that other substances, such as alcohol and cane sugar, may give the same reaction. [I have verified this statement. A. L. B.]

(3) Lactic acid test found from 1 hour P. C. (not examined for sooner) till the end of digestion. After beefsteak the test was weak, early and toward the close of digestion.

(2) Two experiments by Moch in this series. Lactic acid test first appeared 2–2½ hours P. C., remaining till one hour before the close of digestion.

(21) Langguth in two experiments with beefsteak found the test in the first hour; with eggs the reaction was not marked except at the height of digestion.

(10[1]) The reaction first appeared ¼ hour P. C., becoming weak 1 hour P. C., or it was weak throughout the first hour of digestion.

(10) Test found from 1 hour P. C. (not examined for sooner) almost to the close of digestion.

(9) Reaction marked and persistent if food was taken dry; variable and not marked till the close of digestion if food was taken with tea.

(8) After eight vegetable foods, including breadstuffs, rice, etc., the reaction was present from 1–1½ hours P. C. to the end of digestion.

After ten vegetables, including peas, lentils, etc., it was marked early in digestion. With carrots and asparagus the reaction was weak, and with cauliflower and tapioca entirely absent after the beginning of digestion.

(4), (13), (17) No difference was found due to the quantity of food, except that as digestion was longer the duration of the lactic acid test was greater.

(15) Ten experiments each with milk and a group of non-alcoholic beverages (soft drinks) showed a variability in the lactic acid test which, however, was usually more apparent in the latter half of digestion.

In nine experiments with alcoholic drinks and eleven with peptone solutions, the test was pretty constantly found from ¼ hour P.C. till the close of digestion.

(22) Cohn v. Mehring 1 hour after a meal of 150 grams of black bread found 1.6 per cent. of hydrochloric, 2.07 per cent. of lactic acid.

(23) Penzoldt found the Uffelmann reaction in the wash-water after lavage of the empty stomach. Having obtained many liters of wash-water, he endeavored to precipitate zinc or calcium lactate, but failed utterly. He naturally concludes that the Uffelmann test occurs in the absence of lactic acid and fails when lactic acid is presumably present, also that even if the test always indicated lactic acid, it would be practically useless on clinical grounds.

GENERAL CONCLUSIONS.

A longer gastric digestion corresponds with a greater bulk of food, a higher proportion of albumin and, consequently, a later appearance of free hydrochloric acid.

According to Moritz, albumin fixes this acid till the ratio 1:8 or 1:12 is exceeded.

Lack of hydrochloric acid depends on (*a*) a large amount of albumin, (*b*) of ash, (*c*) a peculiarity of the albumin or of the connective-tissue inclosure. (*a*) and (*b*) are illustrated by the fact that cauliflower, containing 2½ per cent. of albumin, allows free acidity 1 hour P. C., while lentils, containing 25.7 per cent. and three times as much ash as cauliflower, allow free acidity only after 3 hours. (*b*) is not so important as (*a*). In illustration of (*c*), calves' thymus, which contains a trifle more albumin than beef and decidedly more ash, absorbs only 9:1000 of hydrochloric acid, as compared with 20:1000 for beef, so that free acidity occurs 2 hours earlier with the former.

300 grams of beef allow free acidity five hours later than 100 grams; with the same amounts of milk, the difference is only ½ hour; with fluids nearly or quite without albumin, the delay is not noticeable.

There is both a relative and an actual increase in the duration of free hydrochloric acidity when (*a*) the percentage of albumin is lowered or (*b*) the bulk of food is diminished.

Food taken with water is more quickly digested than when taken dry.

2:1000 solutions of hydrochloric acid (the normal gastric strength) extract more soluble albumin from meat than does water.

The filtrate of milk artificially coagulated by hydrochloric acid contains no albumin, but soluble albumin is found in the stomach ½ hour P. C., hence the gastric juice must have a solvent action. Bread contains more soluble albumin than cooked meat; after the former, albumin is found ¼ hour P. C., after the latter ¾ hour.

Soluble albumin is not abundant during digestion, probably on account of concomitant absorption. In the last third of digestion it is absent, being instantly peptonized or absorbed.

Peptonization is concomitant with the dissolving of albumin; in fact, unless much albumin is present, peptone alone is found.

Peptones, and more particularly sugar, dissolved in water, are more quickly absorbed than the water itself.

Vegetables containing less than 10 per cent. of carbohydrates usually fail to give a sugar test in the stomach contents, probably from the rapidity of absorption. Foods after which the sugar test is always present for some time during digestion contain 20–50 per cent. of carbohydrates. Sugar is usually completely absorbed long before the end of digestion.

The best test meal consists of 70 grams of white bread with 200 c.c. of water, or milk alone. Meats are not suitable for the ordinary tests.

APPENDICITIS—REPORT OF A CASE.

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It is the object of this paper not to enter into a discussion of appendicitis, but to report a case that came under my observation, to show how difficult it often is to make a diagnosis, and to demonstrate the futility of medication in certain cases.

I was called July 13th, at 3 P.M., to attend G. C. K., white, male, age 7 years. On inquiry I learned that the child was attacked at 10 A.M. with violent vomiting and pain in the abdomen. The vomiting and pain had continued up to the time of my visit, in spite of a number of domestic remedies given by the mother. The boy, a fine healthy fellow, had been perfectly well up to the sudden attack that morning. On further inquiry I learned that the boy had eaten heartily of watermelon just before the attack, and had vomited quite a quantity of the seeds. The bowels had moved once that morning.

On examination of the abdomen I found that he complained of pain one inch to the *left* and just below the umbilicus—a localized pain increased on pressure. No swelling or tumor over this region. I examined carefully the right iliac region; result negative. There was no tenderness whatever over McBurney's point. Pulse, 100; temperature, 101° F.; tongue coated.

The case was regarded as one of indigestion, with probably a malarial element, and was prescribed for accordingly.

For the pain and nausea a hypodermic of morphia, gr. $\frac{1}{8}$, atropia sulph, $\frac{1}{100}$ gr., was given. Calomel, grs. iij, lactopeptine, grs. xv, divided in powders 3, were ordered to be given every two hours.

Quinine, grs. ij, at 6, 9 and 12 the next morning, also a dose of castor oil if the calomel failed to act.

The hypodermic relieved the pain and vomiting; the litttle patient was left comfortable and with a hope that all would be well after the medicine had acted.

Next morning (July 14th) the father called to see me and stated the boy was no better, had passed a bad night—the calomel had been retained, bowels had not acted, castor oil had been rejected, vomiting and pain had returned. He had not attempted to give the quinine.

He was instructed to return and give the child a stimulating enema of turpentine, egg and water, to repeat this if necessary until the bowels moved; also to apply a mustard plaster over stomach. A mixture of tr. cardamon comp., soda bicarb., aq. menth. pip., was ordered for the nausea.

I promised the father to be over (he lived some distance in the country) as soon as I could attend my morning calls.

The child was seen a few hours afterward, and at a glance it was evident he was very ill.

Countenance anxious, pulse 130, typical of peritonitis. Abdomen distended and tympanitic; pain now diffused; temperature 102° F.; vomiting constant; bowels obstinately constipated.

Two enemata had been given without any result.

It was clear that there was obstruction, but the cause, intussusception, volvulus, fecal impaction, appendicitis or worms, was the point to decide.

To relieve urgent symptoms, the hypodermic of morphia and atropia was repeated, ice-bag to abdomen, and measures *per rectum* to open the bowels. A full dose of sulph. magnesia was also given.

So long as the child was kept under morphia the pain and vomiting were in a measure relieved.

I remained with the child until 2 A.M., July 15th, failing to relieve him or get any movement on his bowels. My colleague, Dr. D. J. Spotswood, was called in consultation. We discussed the propriety of an exploratory operation, but decided that his condition was such that it was not warranted. We agreed to continue our efforts to remove the obstruction. Discontinued the ice-bag and substituted hot flaxseed poultices. We also washed out the stomach with a boracic acid solution by means of the stomach tube, and introduced four ounces of olive oil. The oil was retained and in a few hours afterward passed through the bowel; this aided by injections moved the bowels freely.

After this the child seemed better; tympanites, pain and vomiting were in a great measure relieved, so much so that

we were about to congratulate ourselves that the boy would recover.

The next day he was worse again; the vomiting returned, accompanied by the other bad symptoms.

He vomited during the day two very large round worms six or eight inches in length.

The family now felt sure the worms were the cause of all the trouble, and insisted that the child be dosed for worms.

Thinking perhaps the worms might be an element in the case, and to comply with the earnest wish of the parents, calomel and santonine was given, but without results.

The child continued from bad to worse, and died on the seventeenth day of his illness.

Autopsy six hours after death. The abdominal viscera only examined.

The abdomen very much distended with gas; also the intestines.

On section found a diffused, purulent peritonitis; adhesions everywhere.

The appendix at its extremity was gangrenous and perforated.

We found a hard fecal impaction (about the size of a bean) packed down in the extremity of the appendix and almost out through the perforation.

REMARKS.—The history of this case, symptoms and all, shows how difficult it is to make a diagnosis early.

It further shows the necessity for early operation, and how often conservatism proves impotent.

THE SPECIAL THERAPEUTIC VALUE OF INDIAN HEMP IN CERTAIN MORBID STATES.*

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Much has been written on Indian hemp and numerous are the diseases in which it has been employed with success. Nevertheless it is much less frequently used than it should be. Several causes have contributed to this more or less complete abandoning of the drug by physicians, among the chief ones being the variability of its action, the occasional symptoms of poisoning which it has produced, and the ignorance of the fact that there is a certain number of diseases in which it is particularly useful.

According to my own experience, cannabis Indica is especially efficacious as an analgesic when it is desired to combat the element pain associated with spasmodic phenomena. It exercises a favorable action in all forms of headache, whether it be purely functional or be dependent upon an organic affection. Thus I have succeeded in controlling with Indian hemp the violent headaches of cerebral tumors. In these cases it may be equally as effective as morphine subcutaneously or it may be less active. It is able to abort an attack of migraine either at the beginning or after it has persisted for a certain time; with its prolonged use we are able to diminish the frequency and intensity of the attacks. Yet in the palliative treatment of a pronounced hemicrania it is, in general, inferior to antipyrine, phenacetine and trinitrine. As to nitroglycerine, this drug has often given me the best results in decreasing the number and intensity of attacks of migraine when administered, for a long time and in small doses, as suggested by Gowers. Finally, I have employed Indian hemp in the headache of chronic uremia; it may consequently be recommended to those physicians who fear to employ morphine in uremic subjects, a fear which I may say, in passing, I have never shared. But there is one particular form of headache in which the drug acts as an actual specific; this has been confirmed both by my own observation and those of my fellow-practitioners.

The variety to which I refer might be styled a continued or sub-continued type. It begins in the morning and persists during the entire day. It may disappear toward evening, but if the patient arise during the night he will feel it again. The pain is generally diffuse, extending through the whole head; it is dull and may become aggravated at times for several moments and last for weeks, months and even years. Without being violent enough to prevent the patient fol-

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lowing certain occupations which do not require considerable intellectual effort, it constitutes a constant source of ill-health and distress. This form of headache is observed in both sexes, more frequently in young or middle-aged persons. Its etiology is obscure. Many of those affected present no signs of anemia, and even if this diseased state exist and be treated it will have no influence upon the headache. I have not been able to trace any relation between this variety and an excess of uric acid in the blood, and I have met with disappointment in trying to treat this headache by means of dietetic measures and the remedies ordinarily employed in uremia.

It is, however, easily cured with cannabis Indica, either alone or associated with other drugs to combat concomitant disturbances. I ordinarily employ the drug in the form of the extract, administering from 15 milligrams to 3 centigrams in pills morning and evening. If an amelioration follows I continue it in the same doses; but, on the contrary, if there is no marked improvement in ten to fifteen days I increase the dose to 6 centigrams of the extract in the evening and 3 in the morning. If these doses are still insufficient I prescribe 6 centigrams morning and evening. In cases which are particularly obstinate I elevate the dose progressively, giving preferably the stronger dose in the evening, until I obtain a decided amelioration or symptoms of poisoning. Each year I treat a large number of cases of continued or sub continued headache. From the numerous examples which I might present I shall select two cases which will illustrate the type.

In one, the patient, a woman aged twenty-five years, had been affected for about a year with a continuous headache which was especially located in the occiput. The pain, which was generally dull at times, presented periods of exacerbation, accompanied by nausea without vomiting. Sometimes she noticed a weakening of her visual powers, but she never had scintillations of light nor other subjective visual sensations. She was always cold, especially during the night. Her appetite was good; digestion was painful; there was besides constipation with distention of the intestines. Under the influence of Indian hemp, together with gentian and Peruvian bark, I had the satisfaction of obtaining in eight days a notable improvement which continued to increase, with a complete cure in one year, during which time the treatment was continued with perseverance.

The second case was that of a woman of forty-two years who had suffered for seven years from attacks of headache which had appeared after her last confinement, and would come on every eight to fifteen days. The seizure would last for two to two and a half days and occasionally longer. The pain was more severe in the evening than during the day; it was situated in the temples particularly. Beyond a sensation of tingling and heat in her eyes she experienced no other visual disturbances. In the course of years these attacks of headache whose etiology was very obscure increased in intensity. During the intervals her health was perfect, her digestion good and her stools regular. I prescribed the extracts of cannabis Indica and gentian. During the month which followed she only had a few slight attacks, which soon disappeared under the use of the hemp, to which I added, later, the bromohydrate of caffeine.

In the past twenty years, during which I have employed Indian hemp in this form of headache, I have had but few failures to record. I might add that the results were especially striking precisely in the most inveterate and seemingly most obstinate cases.

I do not think that there is either any direct or indirect etiological relation between this disease and migraine, especially as it is sometimes accompanied by migrainous exacerbations; yet that which will relieve these will not cure the disease. In the paroxysms I habitually employ antipyrine, phenacetine, the bromohydrate of caffeine, etc., in elevated doses, after which the hemp is continued.

In neuralgia Indian hemp is one of our best remedies, as Russell Reynolds, of London, has demonstrated and of which I am equally convinced. It also acts well in the lightning-like pains of tabes dorsalis; but according to my experience, antipyrine, phenacetine and, above all, exalgine, are still more efficacious. An important group of morbid phenomena which are more or less controllable by cannabis Indica are gastralgias and enteralgias of various origin. This subject having been treated in an important article by Professor Germaine Sée, I shall not dwell long on it. I

shall only recall that, according to this French clinician, the extract of cannabis Indica exercises a special sedative action upon the pneumogastric nerve and gives excellent results in the treatment of gastro-intestinal neuroses independent of disturbances of the chemistry of digestion. In these cases it relieves the painful sensations and restores the appetite. When there is an excess of hydrochloric acid, Professor Sée orders the bicarbonate of soda, in large doses about four hours after each meal, to assist the action of the hemp. My personal experience has confirmed in all particulars the great value of this drug in gastro-intestinal pains. But I should go still further than the Parisian professor and state that I am fully convinced that Indian hemp not only exerts a favorable influence in purely functional disturbances, but also in a large number of gastric and intestinal affections of organic origin.

There is another group of cases where this remedy will render good service; these are cutaneous diseases associated with intense itching. I always attempt to treat itching by local applications, as in the majority of cases it is of local origin and depends upon certain morbid disturbances of the peripheral nerves. But when, as is sometimes observed, local measures fail, I invariably have recourse to cannabis Indica. It is, above all, in senile pruritus that this remedy has been found useful. In these cases I commence with Indian hemp, and if it fail me I then give chloral. In general, it will suffice to administer the hemp in the evening on going to bed, for it is especially during the night that the pruritus is severe. Still there are grave cases where it is necessary to employ the remedy even during the daytime. As it is indispensable, in order to gain control of the itching, to obtain an immediate and rapid effect of the drug, it is preferable to use it in the form of a tincture, as was suggested by Russell Reynolds. Twenty drops of the tincture equal six centigrams of the extract. From five to ten drops may be taken upon a lump of sugar, which dose may be repeated as often as is necessary. Thus the dose of the remedy may be exactly measured.

Since I have been accustomed to prescribe this drug I have rarely had occasion to observe any disagreeable consequences from its administration. I have met with but two or three patients who have refused to continue the remedy, as it gave them vertigo. Only once did I observe grave symptoms of poisoning, and that in a young man of twenty-nine years who had been subject since childhood to attacks of headache. Each paroxysm began with disturbances of vision resembling hemianopsia and was accompanied by confusion of mind and a sensation of weakness; then a pain would set in either in the forehead or vertex and be associated with nausea, but without vomiting. He would feel cold and be obliged to lie down. These seizures were typically migrainous, very violent and setting in every month; during the last few years they had become much more frequent. They were often brought on by a strong light; constipation favored their appearance. The patient was also myopic. In his case I ordered Indian hemp, one pill containing three centigrams of the extract, morning and evening. I also advised him to take phenacetine during the paroxysms (30–60 centigrams) and gave him besides some pills of aloes and myrrh. As there was no amelioration at the end of a month and he having three attacks during this time which were not to be controlled by phenacetine, I increased the dose of the hemp to forty-five milligrams, morning and evening. The next day he wrote me the following: "I took yesterday evening and this morning the pills which you last ordered. The result was unfavorable. On arising this morning I felt very dull. This disappeared after breakfast, probably under the influence of the coffee. But on returning home the sunlight seemed more intense than usual and all the surrounding objects appeared to dance before my eyes. I was as if in a half-unconscious state. A friend who met me found my lips livid and my eyes glassy. At this moment I experienced a sensation as if I were being carried along at the rate of fifty miles an hour. My friend obtained me a glass of water, which enabled me to go about my business. On arriving at my office I felt worse; I could not work and it was with difficulty that I answered questions asked me. My head was very heavy, I felt as if a weight were upon my chest and I noticed a prickling in my limbs. A physician who was called advised me to go home and to sleep off the effects of the drug. I did so. Since this morning I feel as if I were under the influence of a horrible nightmare."

As the pills prepared according to my second prescription were obtained at another source than the first, I advised the patient to return to the use of the first, which he had borne well. A month later I saw my patient. His headache had decreased, but he had undergone another attack of poisoning which he described thus:

"My supply of pills prepared by the first druggist being exhausted, I thought that I might use those made by the second druggist and which had produced such a disagreeable result upon me. I therefore took half of one of these pills in the morning and three-quarters of one in the evening, without noticing any appreciable effect. On the second day following I took half a pill, after which I went into the city according to my usual habit. In crossing London Bridge the sun and daylight seemed to me particularly glaring. At the same time I experienced a singular torpor, and it required decided effort to keep up the conversation with a friend who accompanied me. These symptoms increased rapidly in intensity to such a degree that I could scarcely use my voice and limbs. I tried to conceal my condition from my companion in avoiding his look carefully. I do not know why I did this. My friend left me as soon as we had crossed the bridge. I then retraced my steps, the symptoms becoming aggravated rapidly. I experienced a difficulty in breathing and time seemed infinitely long, an illusion which persisted as long as the poisoning continued. In the train I could not keep quiet. My limbs would jerk and twitch, my temples beat and I was obliged to change my position every minute. On arriving home I went to bed at once, but I could not fall asleep. My wife thought I had gone crazy. I seemed to have grown twenty years older. I was pale, my lips were livid and my eyes haggard. I spoke without ceasing for two whole hours. Then having taken a cup of tea, with bread and butter, I fell asleep for a few moments, to awaken with a start. I then went to sleep again and slept for an hour. After this I felt restored to my usual health, excepting a sensation of weakness. My first poisoning 'spell' had a comatose character, while the second time there were symptoms of excitement."

The painful and disagreeable symptoms which Indian hemp is capable of producing should not force us to renounce its use, for it is a precious remedy. A long experience has convinced me that these accidents are absolutely exceptional. They result from an idiosyncrasy or a variability of the drug in its active constituents. There are individuals who are powerfully influenced by ordinary doses and even weak doses of the extract of cannabis Indica, as has also been observed of other drugs, as the iodide of potash, quinine, etc.

In order to avoid these one should always begin with small doses of the drug and only increase them slowly and when we are certain of tolerance. The patient should also be carefully instructed in this regard, even when obtaining a fresh supply from the same pharmacy. The tincture of cannabis Indica is well adapted to accurate dosage. Therefore this preparation should always be used when a rapid and intense action is desired, as, for example, in the treatment of pruritus. But whenever a slow and continuous action is wished, the extract is undoubtedly the best preparation. To combat certain concomitant symptoms I repeat that it is often necessary to associate the remedy with other drugs, as with aloes if there be constipation, carbolic acid and menthol when there is flatulent dyspepsia, alkalies and bitter tonics in case of catarrh of the stomach. The conclusion of the preceding is that in headaches of a continuous or sub-continuous type, senile pruritus, as well as in the various forms of gastralgia and enteralgia, there is no remedy more active than cannabis Indica, administered in the manner described.

Pepsin Lavements in Dysentery.

Pepsin has been applied to very many of the diseases of the nosology, yet it remained for Dr. Summers, of Waukesha, Wis., to discover that it possesses a most satisfactory therapeutic action in dysentery. He washes out the bowel with a strong solution of pepsin (½ ounce to 6 ounces of warm water) every three hours, which act, he declares, "clears off the mucous surface effectually." He next employs a soothing injection, such as laudanum and starch, as hot as can be borne. He declares that after two or three washings and injections the patient experiences great relief, and healthy action is at once set up, when, if constitutional conditions receive due consideration, rapid healing follows.—*Medical Age.*

TRANSLATIONS.

THERAPEUTICAL SUGGESTIONS FROM FOREIGN JOURNALS.*

TREATMENT OF LEUCOPLAKIA.

Dr. S. Rosenberg (*Muenchener Medicinische Wochenschrift*, No. 39, 1894), in an obstinate case of leucoplakia of the tongue which had been treated in vain with the most varied remedies for seven years, caused the disease to disappear in a few days under local applications of a 20 per cent. solution of the iodide of potash.

MORPHINE IN INSUFFICIENT UTERINE CONTRACTIONS.

Dr. Kupffer (*La Semaine Médicale*, No. 55, 1894) has found morphine to be an active remedy in uterine inertia during labor. He employed the following formula:

℞ Muriate morphine..... o | o2 (gr. ⅓).
Cherry laurel water.....20 | o (ʒv).

Twelve drops once or twice during the course of the labor.

He thinks that this remedy acts by diminishing the irritability of the striated muscular tissues, thus producing a relaxation of the perineum while it increases the tonicity of the non-striated fibers, including that of the uterus; whatever be the explanation, he has often observed that small doses of morphine will stimulate the activity of the uterus. One single dose is usually sufficient, but a second may be given if the pains weaken and the head is lodged deeply in the pelvis. At the moment of the expulsion of the head he usually administers a few whiffs of chloroform, thus obtaining greater relaxation of the perineum and a quieting of the pains. He also states that this drug is valuable in hastening tardy contractions when there is uterine hemorrhage.

ERGOT IN THE NIGHT SWEATS OF PHTHISIS.

Dr. Goldenbach (*Hospitals-Tidende*, No. 30, 1894) has employed ergot with success in a number of cases of nocturnal sweating in tuberculosis of the lungs. He administers each evening thirty centigrams (grs. v). In other cases he has employed it subcutaneously with good results. He made use of the following solution:

℞ Extract ergot..... 3 | o (grs. xlv).
Dilute alcohol.....
Glycerine..... } 5 | o ää (ʒ j¼).
Distilled water.....

A syringeful to be injected each evening.

Though he has used this drug for a certain length of time in these cases without disagreeable effects, yet he would not recommend it as absolutely harmless, for a phthisical patient may be poisoned by ergot as well as a healthy person, after a longer or shorter time.

TREATMENT OF MEASLES.

Dr. Sevestre (*La France Médicale*, No. 41, 1894) would have the little patient placed in a large-sized room where there will be no exposure to draught. In summer, during the warm portion of the day, the windows may be left open, while in winter the temperature of the room should be kept even and the room be well ventilated. Do not allow the patient to become uncovered. Keep children in bed ten to fifteen days after the appearance of the eruption, allowing them first to go out twenty to twenty-five days after its appearance. The child's mouth should be washed with an antiseptic solution. Porridges, milk and occasionally an egg will be sufficient as a diet. As soon as desquamation sets in rub the child with borated vaseline and give one or two baths containing borax. Medical treatment is purely symptomatic. For the diarrhœa of the beginning of the disease, lessen the amount of food, apply hot fomentations to the abdomen, give a rectal injection and internally the subnitrate of bismuth with or without opium. In case the cough be very distressing, then prescribe:

℞ Tr. aconite root.....10-20 gtts.
Extr. opium..... o | o2-05 (gr. ⅓-¾).
Syrup ether.....10-20 | o (ʒijss-v).
Mucilaginous mixture 60 | o (ʒij).

To be taken by the teaspoonful.

Hot fomentations to the neck and chest, opiates according to the age of the patient, the bromides or inhalation of steam, are also useful. If the conjunctivitis be very

* In charge of the translator, F. H. Pritchard, A.M., M.D.

intense, use compresses wet with a tepid boric acid solution. In case the coryza be severe, irrigate the nose with a warm solution of salicylic acid (1:1000). For the convulsions and nervous erethism employ lukewarm baths, local application of water of the temperature of the room and the bromides. If the eruption is slow in coming out, look for the cause and administer diffusible stimulants, as the acetate of ammonia, hot infusions, etc.

SUBCUTANEOUS INJECTIONS OF ARSENIC IN CHLORO-ANEMIA.

Dr. F. Pacetti (*La Semaine Médicale*, No. 55, 1894) has obtained excellent results with subcutaneous injections of a solution of arsenic in the treatment of chloro-anemia. He employed a watery solution (0.25 per cent.) of the arseniate of soda, injecting every two days a syringeful. In the course of sixty injections a very decided improvement will have been obtained, when its hypodermic administration may be discontinued and the same drug be continued internally in very small doses to maintain its action. An important point is to combat the chronic constipation from which chlorotics usually suffer, thus giving rise to a more or less auto-intoxication from absorption of harmful substances from the feces. This he treats most successfully by copious daily enemas of water containing a certain quantity of tannic acid. These injections act both as evacuants and as antiseptics. Every morning a full bath, which is gradually cooled, may be taken. With these measures he has obtained a complete cure in cases that were apparently very much advanced.

TREATMENT OF CYSTITIS BY SUBLIMATE INSTILLATIONS.

Dr. Colin (*Medicinische Neuigkeiten*, No. 38, 1894) has tried instillations of solutions of corrosive sublimate in the management of cystitis, as recommended by Guyon. Irrigation of the bladder in case the solution was stronger than 1:4000 was very painful; violent vesical tenesmus would be observed with quite a certainty. On the contrary, instillations of solutions of 1:4000 to 1:5000 were well tolerated and were of service in cases where the nitrate of silver was inactive. Out of thirty-four cases treated thus, twelve were cured, nine greatly improved, nine ameliorated and four uninfluenced. The action was immediate in gonorrhœal as well as in tuberculous cystitis, particularly with regard to the rapid diminution of the pains; even in the most inveterate cases instillations acted favorably upon the number of microbes, the vesical capacity and the pains. The same was true of cystitis of prostatic patients and that of unknown origin. Before instillation the patient should urinate. They are best given at first every two days, later daily, increasing progressively the strength of the solution. The strongest concentrations, 1:1000–1:5000, are only to be used in long-lasting cases. The tuberculous forms require the greatest patience in their treatment; a complete disappearance of the bacilli was not to be brought about. The quantity of fluid injected was five to ten grams into the bladder itself, and ten to fifteen drops into the neck of the bladder and the posterior urethra. No alcohol should be added to the solutions on account of its irritating properties; tartaric acid may, however, be employed.

CHLOROSIS.

Dr. F. W. Warfwinge (*Hygiea*, lvi, heft 6, p. 453, 1894) believes that chlorosis is a distinct and separate disease from anemia. In chlorosis, iron in large doses, preferably Blaud's pills, is indicated and is of the greatest importance, while in simple anemia regulating of the diet is the chief indication, while the use of iron is secondary. The iron in the foods is absorbed to cover the deficiency in the red corpuscles. Chlorosis is essentially an affection of puberty.

NON-OPERATIVE TREATMENT OF UTERINE FIBROMATA.

Prof. Lutaud (*Journal de Médecine de Paris*, July, 1894) advises wearing an abdominal bandage in case the woman suffer from symptoms of compression from the increase in size of the tumor. Massage will also relieve the secondary symptoms, meteorism, constipation and cystitis, as well as help to reduce the size of the abdomen. If there be severe metrorrhagia introduction of a laminaria or a sponge tent will assist in controlling hemorrhage. The galvanic current is also

of service, the positive pole in the uterus and the negative applied to the abdomen. Hydrastine has been employed by him with success for several years, not only in controlling the hemorrhages but also in reducing the accompanying uterine hypertrophy which is observed with these tumors. He injects the drug hypodermically, using the following formula:

℞ Muriate hydrastine..... 0 | 50 (grs. vijss).
Distilled water..... 10 | 0 (3ijss).
One syringeful to be injected each day.

In case they are not well borne he administers the tincture of hydrastis canadensis as follows:

℞ Tr. hydrastis canad..... 4 | 0 (3j).
Syrup opium..... 30 | 0 (3j).
Distilled water..... 150 | 0 (3iv. 3vj).
A soupspoonful three times a day.

Ergotine is the remedy usually employed and deserves the confidence of the practitioner. It is best administered hypodermically. Whenever there are heart complications with great vascular distention he associates with it digitalis and the iodide of potash as follows:

℞ Syrup digitalis..... 60 | 0 (3ij).
Iodide potash..... 10 | 0 (3ijss).
Syrup orange peel..... 120 | 0 (3iv).
Ergotine..... 2 | 0 (grs. xxx).
A soupspoonful morning and evening.

Ergot may also be given by the mouth where it is objected to subcutaneously.

Constipation is an almost constant symptom in cases where the tumor is voluminous and is accompanied with pain and tympanites. These symptoms are due both to adhesions and to false membranes, so that both laxatives and opiates are to be used at times, as indicated. A highly nutritious diet should be ordered to prevent dilatation of the stomach and intestines. Magnesia associated with salol will combat the constipation and prevent intestinal infection:

℞ Calcined magnesia.....15 | 0 (3iv).
Salol..... | 50 (grs. vijss).
Sufficient for fifteen powders. One at the beginning of each meal.

When there are vomiting and obstruction of the biliary passages he prefers calomel, which may be given with opium, to avoid colicky pains. He advises the following formula:

℞ Calomel..... 1 | 0 (grs. xv).
Extr. opium..... 0 | 05 (gr. j).
Sufficient for ten pills or powders. One each morning and evening.

IODINE GIVEN WITHOUT DISAGREEABLE SYMPTOMS

Dr. Hardaway (*La Semaine Médicale*, No. 54, 1894) advises the following mixture as free from the ordinary disagreeable after-effects of the iodic preparations:

℞ Iodide potash.....15-30 | 0 (3iv-3j).
Citrate iron and ammonia. } 8 | 0 āā (3ij).
Tr. nux vomica..... }
Water..... 45 | 0 (3jss.).
Compound tr. cinchona.....60 | 0 (3ij).
A teaspoonful after each meal.

SOME FATAL AFTER-EFFECTS OF CHLOROFORM IN CHILDREN.

Dr. L. G. Guthrie (*Centralblatt f. d. Medicinischen Wissenschaften*, No. 37, 1894) calls attention to a severe and nearly always fatal after-effect of chloroform in children, with the following course. Immediately or some hours after the operation vomiting occurs, the child becomes restless, delirious and cries constantly, while the whole appearance is that of one suffering from mania. The child's face is reddened, rarely pale, the eyes dry and the pupils dilated. After some time an apathic condition follows, while consciousness returns during the remission. Then follows wild delirium and thus it is continued until, in the course of several hours or a few days, the child succumbs. The writer has observed ten such cases, of which only one recovered. In all these there was violent and continuous vomiting; the vomited matter contained no blood, but always bile. The temperature was subnormal, rarely elevated. Death takes place with symptoms of increasing collapse. He ascribed the condition to a fatty infiltration of a previously fatty liver. In fatty liver in children he therefore thinks chloroform contraindicated. Clinically, however, this is difficult to diagnose.

Pilocarpine in Urticaria.

Dr. R. Abrams, of New York (*Med. Record*), claims excellent results from the use of this drug in the treatment of both acute and chronic urticaria. Adults should get the drug hypodermically in doses of one-sixth to one-half a grain. Children of one year should get it by the mouth in doses of one-twentieth to one-eighth of a grain every evening at bed-time. For children two or three years old the dose is one-fifteenth to one-sixth. The writer claims that pilocarpine is almost a specific. By administering the drug with care and increasing the dose gradually no untoward effects need be looked for. It is a good plan to stay with the patient for twenty minutes after giving the drug.

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SATURDAY, NOVEMBER 3, 1894.

EDITORIAL.

EXPERIMENTAL TYPHOID FEVER.

Sanarelli (*Ann. de l'Institut Pasteur*, April, 1894) gives an account of an exceedingly interesting series of experiments in the production of a disease by typhoid toxin which resembles closely that produced by the bacteria themselves. The toxin was prepared by inoculating flasks of the culture fluid with virulent typhoid bacilli, and allowing them to stand for about a month at a temperature of 37° C. They were then sterilized and kept at the ordinary temperature for about eight months, at the end of which time they were hermetically closed and allowed to macerate for several days at 60° C. The liquid in the flasks formed two layers, the upper being perfectly clear, which was carefully removed. The toxic and pathogenic effect of this fluid was tested on rabbits, mice, guinea-pigs and a monkey. The summary of the results obtained in reference to typhoid is as follows:

1. Eberth's bacillus, having penetrated the organism, produces a toxin which acts on the nervous system and brings about death by collapse.

2. In addition to this toxic effect, this toxin acts peculiarly on the mucous membranes, especially of the intestine, and thus brings about the familiar lesions.

3. All of the anatomical changes produced by the toxin, and independently of the virus, are accompanied by symptoms presenting very close analogies with those of human typhoid.

4. In experimental, as in human typhoid, Eberth's bacillus is not found in the intestinal contents; this fact militates against the idea that the disease is a process infectious in origin localized in the intestine.

5. The absence of the specific organism from the contents of the intestine is explained in two ways: (*a*) Because typhoid fever is an infection of the lymphatic system only; (*b*) because directly the poison begins to act on the intestinal walls *B. coli* becomes pathogenic, and increases so enormously as to obliterate other forms.

6. Given the grave toxic anatomical changes of the intestinal mucous membrane, the *B. coli* constitutes the first

cause of the secondary infections and local izations so frequent in the disease.

7. If the animal is partially vaccinated the *B. coli* in the intestine produces only local effects.

8. Animals vaccinated against Eberth's bacillus are also vaccinated against *B. coli*.

Dr. William Goodell.

Dr. William Goodell, the eminent gynæcologist, who had been in failing health for the last two years, died at his residence, 1418 Spruce Street, on Saturday morning, aged 65 years.

Dr. Goodell was the son of the Rev. Wm. Goodell, D.D., of Holden, Mass., and was born on the island of Malta while his parents were journeying to Turkey, where his father was engaged in missionary work.

In 1849 he entered Williams College, Massachusetts. Graduating three years later, he came to Philadelphia and continued his studies at the Jefferson Medical College, and received his diploma in 1854. The same year Dr. Goodell rejoined his father in Constantinople, and there entered upon the practice of his profession. In 1857 he married, at Smyrna, Asia Minor, Caroline, daughter of the late Judge Thomas S. Bell, of West Chester, Pa., who survives him. In 1861 he returned to America on account of the unsettled condition of political affairs in Turkey, and, locating in West Chester, there commenced practicing medicine in this country.

Dr. Goodell made a specialty of obstetrics and diseases of women, on the subject of which he was a prolific contributor to the medical journals, and was also the author of "Lessons in Gynæcology."

In 1865, on his appointment as Physician in Charge of the Preston Retreat, at Twentieth and Hamilton Streets, he came to reside permanently in this city, and continued to hold this appointment until 1887.

In 1870 he was appointed Lecturer on Obstetrics and Diseases of Women of the University of Pennsylvania, and in 1874 Clinical Professor of the University of the Diseases of Women and Children. He was also Honorary Professor of Gynæcology of the University, a member of the National, State and County Medical Associations, of the College of Physicians, of the American Philosophical and American Pathological Societies, and a correspondent of the Boston Gynæcological Society, of the London Obstetrical Society and of the Imperial Medical Society of Constantinople.

Congenital Constipation.

F. Huber reported the case of a boy, five weeks of age, who since birth had been troubled with constipation and colic. When first seen by the author he was suffering great pain, straining and kicking. The abdomen was swollen and tympanic and the child had been vomiting for two days. The temperature was 102°. By process of elimination a diagnosis of acute intestinal obstruction since birth was arrived at. It was due to an impaction of fæces in the reduplication of the sigmoid flexure of the colon, a condition frequently misunderstood or entirely overlooked. While in many cases it was a very trivial matter, still it was not uncommon for it to lead to serious illness and even to seriously jeopardize life. In infancy the descending portion of the colon was disproportionately long, and by being crowded down into the narrow pelvis it formed a number of curvatures instead of one sigmoid flexure. The treatment consisted in giving high rectal injections until the proper relation had been established between the colon and the sigmoid flexure. It was, of course, often necessary to continue the treatment for years.—*Boston Med. and Surg. Jour.*

Treatment of Laryngeal Phthisis.

Dr. Hajek presented a patient with laryngeal tuberculosis upon whom he had tried a new treatment. The infiltration of the epiglottis was so great that the man could no longer swallow. Dr. Hajek removed the entire epiglottis by means of a galvano-caustic loop, and treated the wound with lactic acid. Four weeks later the patient was able to swallow with ease. Since then he had curetted one of the vocal cords which was ulcerated. This was also dressed with lactic acid and healed rapidly. It is now one year since the epiglottis was extirpated, and the cure is maintained. The patient has increased in weight 19 kilogrammes (38 pounds), proving that his general condition is better. Dr. Hajek stated that he had already extirpated the epiglottis of three patients.

ABSTRACTS.

PEPTONES.

It is commonly supposed that peptones must be the products of the action of pepsin on proteid and albuminoid substanees. As a matter of fact, however, *true* peptones result from the fermentative activity of pancreatin. As will be seen by the pharmacopœial tests, under the respective headings, pepsin is active only in acid solution, pancreatin only in alkaline solution. There is one ferment, however, which is active in neutral solution, and this is papain, the so-called vegetable pepsin. A word as to the production of these various ferments. Pepsin, as is well known, is prepared by two general methods, producing "precipitated" and "soluble" pepsin, respectively. The former is prepared by exhausting the mucous membrane of the pig's stomach with water containing hydrochloric acid and precipitating with sodium chloride; the latter by macerating the mucous membrane in acidulated water and evaporating the resulting solution nearly to dryness, redissolving, precipitating the peptones formed by means of appropriate agents, evaporating and scaling. Pancreatin, or "trypsin," is mostly obtained by extraction of the pancreas with glycerin and precipitating with alcohol. Papain is obtained by expressing the fruit of carica papaya, diluting the resulting milky juice with water, allowing the resinous constituents to precipitate, filtering, and precipitating by means of alcohol.

"Peptones" are divided into the following four classes:

1. Pepsin-peptones. These are obtained by allowing gastric juice, or pepsin in acid solution, to act upon albuminous substances; these may be egg-albumen or the albuminoids in meat. When the previously coagulated albumen is entirely liquefied or rendered diffusible by the action of the pepsin, the product is called albumose, which is considered to be nothing more than a hydration product of albumen. Its advantages over albumen are its greater solubility, easier diffusibility and its non-coagulation by heat. The majority of true pepsin-"peptones" are made, however, by allowing pepsin in acid solution or gastric juice to act on fresh beef previously freed from fat and sinews for 12 hours at a temperature of 150° C. (22° F.). After cooling the liquid is filtered through a moist filter to retain all fat, tested with nitric acid for unconverted albumen, neutralized with sodium carbonate and concentrated in vacuo or on the water-bath either to syrupy consistence or to dryness.

2. Pancreas-peptones. These are the *true* peptones. They may be obtained by acting on albuminous substances with pancreatin in alkaline solution (sodium carbonate or calcium hydrate), otherwise proceeding precisely as stated under pepsin-peptones. The action of pancreatin, or "trypsin," is accompanied by deeper-reaching changes than that of pepsin, such products as leucin, tyrosin, etc., being formed. The pancreatin-peptones possess a far more disagreeable taste than the pepsin-peptones or albumoses and are also inferior in keeping-power.

3. Peptones from vegetable pepsin. These are now produced in not inconsiderable quantities by allowing papain to act on meat. The juice of the agave or century-plant, as well as that of the pineapple and American pawpaw, also comes within the realm of vegetable pepsin. These peptones, however, have long been regarded not as true peptones but as identical with the next and last group.

4. "Meat solutions," obtained by superheated steam. Under this heading we may also include those solutions which are obtained by the action of boiling water+hydrochloric acid on meat. To prepare such peptones meat, previously freed from sinews and fat and finely comminuted, is placed into cold water contained in a vessel fitted with a nearly air-tight cover and a false bottom to prevent the meat from burning. The water may contain 2 per cent. of hydrochloric acid or not; but the addition of the acid will shorten the process. After boiling for 10 to 15 hours, removing from the fire, rubbing in a mortar to an emulsion-like consistence,

and boiling for another 15 to 20 hours, the resulting liquid will contain true albumoses and peptones, although not consisting entirely of such, since not all of the albumen is converted by the heat. Here is a field that offers good returns in more senses than one to the pharmacist. In view of the fact that the market is flooded with so many "peptones" and "solutions of peptones," some of which depend more upon the wine and coca than upon the presence of any real peptone, and that they often produce imaginary rather than real results, the pharmacist should prepare his own peptones and introduce them to the notice of the physicians with whom he comes in contact, explaining to them that peptones are exceedingly prone to decomposition, and that therefore they cannot reasonably be expected to keep for any considerable time.

To show the physician how he may in from 4 to 12 hours' time, by digesting 1,000 grams of prime beef with about 10 grams of pepsin, 40 cubic centimeters of hydrochloric acid, and sufficient water, produce about 250 grams of peptone, representing in a soluble and predigested form the 1,000 grams of beef, should thoroughly convince him that reliable peptones can be furnished by the pharmacists. Care should always be taken, however, to neutralize the free acid by means of sodium carbonate.

By a little experimenting the pharmacist may for himself find out the best methods and manipulations for producing peptones, *true* peptones, which will give good results, and which are, in addition, more profitable to sell than the proprietary articles of commerce.

In conclusion it may be said that the true peptones, or those produced by pancreatin, seem to possess not any more nutritive value than the albumoses, or the "peptones" produced by pepsin. Either of these possesses a very disagreeable taste, and, as before mentioned, will not keep very long. The taste of the solution must therefore be corrected, either by salt and pepper or, preferably, by a quantity of beef extract. It may sometimes be indicated that the so-called meat alkaloids or bases (syntonin, etc.), also the salts (potassium phosphate, etc.), should be removed. In that case the meat to be acted on must be extracted with boiling water previous to subjecting it to the action of the ferment. The solution may be evaporated and again added to the peptones, if necessary, in part or in whole. As peptones are soluble in wine, syrup or hot water they can be made palatable as well as nutritious, and also—remunerative.—*Western Druggist.*

PATHOLOGY OF PNEUMONIA.

Dr. F. O. Broady, in *Sanative Medicine*, says: Whatever the cause may be, the disease begins with a recession of the blood from the surface, or the capillaries of the skin, and a predisposition of an unusually large blood mass to accumulate in the lung capillaries. Any sudden chilling of the surface with a corresponding deficiency of tension or tone of the lung capillaries will produce this condition, on the principle that a fluid will find the point of least resistance. An increase of blood in any part of the body will lead to an inflammatory condition there, in which expression the idea of softening of normal tissue is involved, and this softening takes place very rapidly; in fact it begins at once, whether the walls of the lung capillaries are weaker than usual either on account of the youth of the patient or because of the poisons, as alcohol previously taken, or whether they are not previously weakened. In either case it will not take long before this inflammatory softening causes the vessel walls to give way at some point, slightly at first, perhaps not more than enough to permit serum to filter through without the red corpuscles, but as the process goes on, even these corpuscles find openings large enough to escape, and the air-cell rapidly fills up with exuded blood material. We now have the stage of red hepatization. The effusion of all this matter is a most fortunate thing, however, and is perhaps the only chance the patient has for his life, for the air-cells are not only filled, but also *distended* by the escaping blood. The result of this distention is to press on the blood-vessels in that immediate neighborhood, and this outside pressure furnishes the tone to the vessel walls that was lacking, and the heart can

no longer send such an excessive amount of blood to parts that now are not so atonic, but must find room for it in another region of the body. The pressure from without on the blood-vessels also, of course, has a tendency to check the escape of blood-elements. If the air-cells were only filled and not distended, we would have a condition in which the exuded blood-elements would have a regular supply of food furnished through the breaks in the vessel walls, and through this regularity of food supply would increase and then form new tissue: this to the utter destruction of any hope of ever getting the air-cell clear again from foreign matter in order that it may perform the function for which it was intended. This condition, or one very similar, does actually exist in interstitial or chronic pneumonia. The distention, then, of the air-cells by the exuded blood-elements is fortunately great, and it is also sudden, which is also fortunate. This rapid and great distention leads to a rapid and considerable shutting off of the previously existing food supply (found in the blood) to the tissue germs already found in the air-cell, and here, as everywhere else, a considerable and rapid limitation of the food supply to a part leads to fatty and other disorganizing degenerations.

We now have arrived at the stage of "gray hepatization." When a cell undergoes fatty degeneration it increases in size, and, hence, this results in still greater distention of the air-cells, which leads to a still greater limitation of the food supply to the part, and which naturally produces a more sure and rapid fatty degeneration. It is necessary to have this fatty change in the exuded material, because this is the only state in which it can be consumed by the white blood corpuscles which swarm wherever an injury has taken place, consume the *débris* and reënter the circulation when the destruction has been repaired. The organism has to depend on these corpuscles to repair the pneumonic injury and carry off the exuded blood and tissue elements, for these cannot be coughed up: nothing can be coughed up behind which a considerable quantity of air cannot get.

CERVICAL GANGLION OF THE UTERUS.

BYRON ROBINSON, M.D.

It would astonish any student to know how little has been published in regard to the nervous system of the female genitals which is of an original character. The reason for this is at once apparent when one pursues the study for several years. Of course the simplest and easiest way is to dissect the genitals of man and animals. But few do that. And, besides, to dissect with value and discrimination requires time, experience and patience. The best way is to secure an infant cadaver and drop it in alcohol for several weeks, and for comparison secure some six to eight weeks' fœtal pigs from the slaughter-house and treat them likewise.

To get at the parts most readily, open the infant's abdomen and take away the hip-bone. Unjoint it at the sacro-iliac joint, then cut it away at the tip of the ischial spine, and then saw through the pubic rami at the center of the obturator foramen. The field is now clear. Next, observe the course of the hypogastric plexus just beneath the peritoneum at the promontory of the sacrum. It will show itself like white threads shining through the peritoneum. The white lines are the hypogastric plexus and should be carefully followed by a sharp-pointed scissors as far as the region of the cervix. Now, with gentle care, clear away the various tissues from the roots of the first, second, third and fourth sacral nerves. It will by this time be clear to the sight that the lower end of the hypogastric plexus and the branches from the sacral nerves (especially the third and fourth) converge near the cervix into a mass of white tissue. This mass of whitish-gray tissue is the ganglion of the cervix uteri. So far as I can ascertain, this ganglion was first described by a physician named Walter. The existence of the ganglion has been denied by Snowbeck, of the English, and by Kilian, of the French. The defenders of the ganglion are chiefly Lee (1842) and Frankenhausen (1867). The names of

those who have worked at this ganglion are very few even to this day. The only worker on this ganglion that I know of in the last generation is Dr. Jastrobef, of St. Petersburg, in the clinic of Professor Slavjansky. Dr. Jastrobef used thirty bodies to secure anatomical and pathological knowledge. I have been working at the nervous system of the female genitals for some five years, and I did not become aware of Dr. Jastrobef's labors until August, 1894. Nearly every worker in this subject comes to essentially the same conclusions, but some little manifestations arise which induce said observer to think every other investigator overlooked. Lee and Frankenhauser showed with anatomical positiveness the largeness and solidity of the cervical ganglion, while Snowbeck and Kilian tried to belittle its size and even its existence. Jastrobef's short account simply sides with the idea that the cervical ganglion is a mere plexus of nerves.

After careful dissecting (man and animals) I must say that the cervical ganglion is a veritable ganglion, just as the superior cervical ganglion is. The cervical ganglion is a real ganglion. It is true it varies in shape and size, as all sympathetic ganglia do, but it is constant and real. I shall carry on this investigation for the next few years in man and animals and prove its constancy. The last cadaver which I dissected for the purpose of identifying the ganglia for study was that of a woman about seventy years old. The ganglion was fully three-fourths of an inch long and over one-fourth of an inch wide. It was a thick, hard, irregularly shaped mass of nerve-tissue receiving the hypogastric plexuses and the branches of the sacral nerves and sending out many small nerves to the uterus, bladder and rectum. The ganglion in this special case received all the branches of the sacral nerves before they entered the uterus and all the nerves of the hypogastric plexus, except two or three, before they were sent to the uterus. It appears, then, that the cervical ganglion is the distributor of nerves to the uterus. It is no doubt the ganglion of the uterus. Its business is to control the uterus. Leashes of nerves start out of this ganglia to the uterus, bladder and vagina. The vagina was, next to the uterus, the favored organ for numerous strands. The ganglia lie near the cervix, one on each side. In the above case the right cervical ganglion was much more solid and compact than the left. More than a dozen branches could be counted going to the uterus, to the vagina and to the rectum, in the order of abundance. In this case of a woman seventy years of age the ganglion was perfect and distinct, as it is in an infant cadaver. The wonderfully intimate nervous connection of the uterus to both rectum and bladder should be a lesson to the gynecologist. The uterus, rectum and bladder are richly supplied by many strands from the same great trunk (hypogastric plexus). It is almost impossible to irritate one organ without the other two being brought directly into the disturbed field.

During the last five years I have had many subjects (man and animals) to study the sympathetic nervous system, and one fact has time and time again impressed me. This fact is the widespread and profoundly intimate nervous connection of the kidney and genitals. So far as the nerve connection is concerned the organs should be written genito-urinary, with a distinct hyphen. The explanation arises in embryology, where both genital and urinary organs arise from the same source —the Wolfian body. I wish to give credit for this same idea to Dr. Frankenhauser, whose work I was able to secure only a few months ago, as it is out of print. A glance at a well-dissected sympathetic nervous system lying *in situ* would enable a physician to cast aside forever an error long propagated in obstetrics, and to my own knowledge taught even to this day from obstetric chairs. It concerns pressure over the sacral promontory to stop post-partum hemorrhage. It is taught that pressure compresses the aorta so that the blood is checked from going to the uterus. A few actual trials in obstructing the aorta by pressure will soon dispel the delusion. The facts in the case are that the irritation of the hypogastric plexus (in attempting to compress the aorta) induces the uterus to contract. The more pressure and vigorous irritation applied to the sacral promontory the more vigorous and certain will be the uterine contractions, so that the explanation of how post-partum hemorrhage is checked by compressing the aorta is certainly wrong. The mechanism is accomplished by the irritation of th hypogastric plexus. So far I have no had the opportunity of dissecting a preg

nant uterus, to determine whether the cervical ganglia enlarge, but both Lee and Frankenhauser say they do. It is probable, however, that John Hunter is correct in his suggestion that it is the connective tissue, and not the nerves themselves, which enlarges in pregnancy. Almost every investigator of the uterine nerves has come to the opinion that it is the infant cadaver which serves the best purpose. The nervous system of the infant is disproportionately large and is plain to the eye, and it can easily be separated from the delicate connective tissue. The cervical ganglia are very plain in the infant. Two to four nerve-branches pass along with the ovarian vein and artery to the ovaries. At the junction of the tube and uterus (*i.e.*, at the origin of the round ligament) the ovarian and uterine nerves join—anastomose. The cervical ganglion, of course, shrinks after the menopause, but its shrinkage must be limited, as many of its branches supply the rectum and bladder, organs which persist in further use. Yet it appears to me that the rectum and bladder in old female cadavers are considerably atrophied as well as the uterus.

Jastrobef in his short article notes that in disease of the genitals on one side the ganglion of the same side is affected. He reports two cases where the ganglion and the genitals of the same side were both diseased. As a considerable portion of the cervical ganglia rests on the vagina, even total extirpation of the uterus would include but a very small part of the ganglia, for the cervical ganglia are situated too low down to be included in the extirpated uterus. These few remarks may call attention to the cervical ganglion of the uterus, its limited literature, the varied opinions as to its existence, shape and size, as well as the slight records of its functions and pathology.—*Med. Rec.*

THE INHALATION OF OXYGEN IN OPIUM-POISONING.

The usefulness of potassium permanganate as an antidote in the treatment of opium-poisoning may, in view of the evidence presented, be admitted. Upon what this antagonistic action depends has, however, not yet been demonstrated, though it is reasonable to assume that the oxidizing quality of the potassium salt plays a prominent role in this connection. This supposition would, in some measure at least, seem to be supported by the fact that the permanganate has also proved useful in the treatment of phosphorus-poisoning, cyanid-poisoning, and snake-bite. Further confirmation of this view appears to be afforded by the recent experience of Merry (*Lancet*, No. 3,692, p. 1372), who reports a desperate case of opium-poisoning in which inhalations of oxygen seemed to act as the determining factor in bringing about recovery. The victim, a male, thirty-two years old, had, three hours before coming under observation, taken of a preparation of variable composition an amount supposed to represent eight grains of morphine. The man was unconscious, cyanotic, and breathing stertorously about fifteen times per minute. The corneal reflex was abolished, and the pupils were small and inactive. Flagellation, cold affusion, the use of the interrupted current, the vapor of strong ammonia, the subcutaneous injections of ether failed to bring about reaction. The respirations were labored and had fallen to eight per minute, and the pulse had become almost imperceptible. The cyanosis suggested the use of inhalations of oxygen, and these were forthwith instituted, pure, undiluted gas being employed. In the course of twenty minutes the face had regained its normal color, the respirations were fuller, easier, and more frequent, and the pulse had become perceptible and regular. The patient was still stupid, although there was a slight response to corneal irritation. After an interval of half an hour the inhalation of the gas was resumed, with further marked benefit. Consciousness returned, and after the repetition twice of the inhalations after intervals of three-quarters of an hour, the point of danger seemed to have been passed. The man remained drowsy during the day, but did not relapse into stupor. He made a perfect recovery. The suggestiveness of this experience is entirely obvious, and the safety and innocuousness of the method must surely commend it to favorable consideration and intelligent trial in suitable cases.—*Medical News.*

PRIMITIVE MAN.

From a geological point of view the Human Period comes so late in the history of the building up of the crust of the earth, so late in the long succession of animal life, that its date must be referred to the rocks now in process of formation. One of the few things, indeed, which carries the early part of the Human Period back beyond our present associations is that there lived in what we are wont to call the beginning, coeval with man, many animals which are now extinct. We may fairly assume that the relics of primeval man which it has been the good fortune of the geologist to discover did not belong to the lowest type of humanity. Primeval man in the true meaning of the term must have been a creature of considerably lower cranial development than any hitherto discovered, for some skulls are about equal to, while others show a considerably higher brain capacity than, many of the lowest modern savages. The fact that there are now living in the world creatures of our own race whose cranial capacity and conformation places them on a level with, or lower than, the earliest discovered man, is of great interest; for if we assume—and this may be done without great error—that the lowest of these ancient skulls is a fair representative of the development of the age in which its possessor lived, then we arrive at the mental capabilities of the inhabitants of Europe in those days by observing people of similar development in the present day.

Prior to the commencement of the last Glacial Period there is no proof of the existence of man. The climate of Northern Europe could not, however, have been the cause of his non-appearance; for if we may judge from the remains of the flora underlying the glacial drift, and immediately above the chalk near Cromer, it must have been congenial to a form of vegetation similar to that of the present day. Strange, indeed, does it appear that among these relics of the age immediately preceding the last Glacial Period we have no trace of the existence of man; but whether he had not then come into existence, or was in those days one of the rarer species of mammalia, cannot be positively affirmed. Certain it is, however, that in the first discovered specimens man had attained a comparatively high state of development, and that there was nothing in the climate of the period immediately preceding the last time when Northern Europe was enveloped in sheets of ice which could prevent his living comfortably on our shores, for we know that the geographical distribution of our race is infinitely greater than that of plants, mollusks, and the mammals immediately below us in organization. Those who hold the doctrine of development in any form cannot suppose that man was introduced on to the earth at that stage in which we first find his remains. The search must be made considerably earlier if primeval man is to be discovered, not necessarily in Northern Europe, or even the northern hemisphere, but more probably in those strata which in a more temperate climate were in course of formation during the last Glacial Period in our country.

During that great age of ice, Northern Europe was quite as uninhabitable as the middle of Greenland is at the present day. So great was the accumulation of ice and snow that at times it buried the highest mountains in England and Scotland to a depth of two or three hundred feet, completely filling the bed of the North Sea, and thus joining the British Isles to Scandinavia, Germany and France. Westward, the vast ice-sea crept away far out into the Atlantic, for miles grinding along the bottom of the ocean, till the water became sufficiently deep to enable it to float. The terminals, like those of existing ice-sheets in the far North and in the glaciated regions of the South, formed immense cliffs, standing hundreds of feet in height, from which every now and again massive icebergs would break away, and, sailing southward, would gradually melt as they reached the warmer air and water between the fortieth parallel and the Tropic of Cancer. That this country, as well as the rest of Northern Europe, has been enveloped in a vast ice-sheet is so well established a fact that it hardly seems necessary to recall evidence on the subject. It may readily be conceived that when the last Glacial Period came on, in place of the mild climate which preceded it, it would change the aspect of the country as completely in the animal as in the vege-

table world. But after this age of intense cold had last for thousands of years, the winters again became shorter, and the summer sun reclaimed first a coast line, and, having thus obtained a more congenial element on which to expend his warmth, drove back the ice-sheets inch by inch into the fastnesses of the hills. Ocean currents depressed into the southern hemisphere now poured tepid waters into the northern seas, which rapidly dispelled the sheets of floating ice, and, as they played upon the shores of Europe, aided to a great extent the other causes which have brought about the climate we now enjoy.—*Public Opinion.*

THE BACTERIOLOGICAL DIAGNOSIS OF DIPHTHERIA.

Since the publication in the *British Medical Journal* of August 18th of the important communication by Dr. Hermann Biggs regarding the bacteriological diagnosis of diphtheria, the general press has repeatedly referred to the subject. It must not, however, be imagined that London has been absolutely supine in the matter. The report of the medical officer to the Local Government Board for 1891–92 contained a report by Dr. Klein showing that by bacteriological investigation the cases in which scarlet fever was complicated with membranous sore throat could be divided into two classes, one of which was truly diphtheritic and the other was not, with this general result, confirming what had been discovered before, that membrane occurring in the early days of scarlet fever was not diphtherial, whereas that which came on in the later stages and in convalescence was true diphtheria. On March 15th of this year a paper was read before the Medical Society by Dr. Wethered, on the "Diagnosis of Diphtheria by Bacteriological Cultures," giving details of the process and its results. The medical officers of the hospitals of the Asylums Board have endeavored to differentiate the mass of membranous throats coming before them into the true and the false types. In the report of the Statistical Committee for 1893 mention is made of certain bacteriological investigations having been undertaken. Some of the results were reported to the Clinical Society by Drs. Washbourn and Goodall on January 12th, and more lately the method has been largely used at the South-Eastern Hospital by Dr. Thomson. No doubt the pathologists at the various general hospitals have also carried out investigations on the same lines but on a smaller scale, and the Clinical Research Association, the institution of which we noticed last week, is ready, for a small fee, to examine membrane forwarded to it and report by telegram. What, however, has not been done, we believe anywhere except New York, is to create a municipal organization by which, as part of the ordinary sanitary machinery of the health department, the bacteriological diagnosis of diphtheria shall be put at the disposal of the profession. The organization there is so complete and its efficiency is so highly spoken of by Dr. Hermann Biggs that we cannot but hope that some county council, preferably that of London, will take the matter up in the same spirit. The culture tubes would be stored at numerous depots, probably the vestry offices. All that the doctors would have to do would be to obtain the tube, inoculate it by means of a sterilized swab supplied in a separate tube along with the culture medium, replace the cotton plug, and return the tube to the depot. At a certain hour every afternoon these tubes would be collected from all the stations, and taken to the central laboratory, where by noon the next day the diagnosis would be ready to be dispatched by letter or telegram, according to the urgency of the case. The importance of the matter is greatly increased by the assertion of Dr. Biggs, in which he merely confirms the observations of Prudden and Baginsky, that a very large number of cases of membranous sore throat are not due to the bacillus of diphtheria, but merely to ordinary cocci, and that the mortality of such cases is practically *nil*. In New York they do not accept these non-bacillary cases at the hospitals, and on the other hand they do not discharge cases of true diphtheria until bacilli cease to be found, sometimes not for several weeks. When the tubes are prepared wholesale the expense is said not to be great, and probably as an experiment the bacteriological work would be undertaken by an existing laboratory.

EPIDEMIC MUSCULAR RHEUMATISM.

Dr. Isaac Newton (Tonbridge, Kent) sends the following note on an affection which has appeared in Kent recently:

I have seen a comparatively large number of cases (43) of acute muscular rheumatism during the last five weeks, all presenting an extraordinary similarity, so much so that I was able confidently to predict the exact course that any individual case would take. I have seen no record or description of anything of this nature occurring in such an epidemic form. It comes on suddenly, and is characterized by pain, increasing in intensity for a few hours until it reaches its maximum, situated in and affecting the abdominal and lower intercostal muscles, rendering breathing painful, short and rapid, not infrequently also affecting the muscles of the back, especially in the lumbar and upper sacral regions. It is accompanied by a rise of temperature, ranging from 100° F. to 104° F., according to the severity of the attack, with its usual concomitant effects of headache, injected conjunctivæ and furred tongue. The pulse remains comparatively slow, 80 to 90 beats a minute, occasionally 100. The patient perspires more or less profusely, giving off the peculiar acid odor of a rheumatic affection. There is no vomiting, feeling of nausea or other gastro-intestinal disturbance. If treated with such drugs as quinine, acetate of ammonia or sweet spirits of niter, or if it be left untreated, it runs a course of about three or four days, the pain and fever gradually abating on the second or third day. In two cases it was accompanied on the second day by acute endocarditis

I look upon it as entirely distinct from influenza, which it resembles, and as having a rheumatic origin, for the following reasons:

1. Although I have seen such a considerable number of cases during the last few weeks, I have not had a single case of any of the recognized varieties of influenza.

2. It is not followed by any of the marked depression or weakness so characteristic of influenza.

3. It is peculiarly amenable to treatment: 10-grain doses of salicylate of soda together with 15 grains of bicarbonate of potash administered every four hours invariably brought down the temperature in from six to twelve hours. This combination of drugs has, so far as I know, no such specific effect in influenza.

4. If infectious, it is very slightly so; as, of all the cases observed, in only one instance has more than one member of the same household been affected. (A servant had it, then in exactly seven days the wife and seven days later the husband were attacked.) I conclude that it is not infectious, a strong contrast to influenza.

5. There has been no complication or affection of either lungs, air-passages or nasal cavity concurrent with or as a sequel to it in any single case.

6. Lastly, and not least, the heart complication points strongly to a rheumatic origin.

Example.—G. J., aged 32, was taken with acute pains in the abdomen and in the lower intercostal region on the afternoon of August 4th. That evening I found him in bed, with difficulty of breathing owing to the affection of the lower intercostal muscles on both sides; pulse 92; temperature 103.4° F. He was perspiring profusely, the acid odor of the perspiration being well marked. The heart-sounds were normal, and nothing abnormal was to be found in the lungs. I prescribed the following:

℞

Sodii salicylatis	5j.
Potassii bicarbonatis	5j.
Liquor opii sedativi	5ss.
Spiriti chloroformi	5jss.
Aquam ad	5viij.

One-sixth part every four hours.

I saw him twelve hours later, and found that all pain had ceased after taking two doses; the temperature was 98.4° F. The patient was practically well. He got up that afternoon, and I put him upon an alkaline and gentian tonic. On August 6th he returned to work; he has since felt no return of the pain, and has been perfectly well. This tallies exactly with and might be an exact description of all the other cases so treated.

The cases above mentioned of heart complication occurred before I had discovered the specific effect produced by salicylate of soda and bicarbonate of potash. There was no valvular disease in them previous to the attack. Only a few weeks before I had both these patients

under notice; the condition of their hearts was noted accurately, and there was no trace of any cardiac murmur or trouble to be made out then. I attribute these attacks to the exceedingly wet summer that we have experienced this year. This district lies especially low in the valley of the Medway.—*British Med. Jour.*

HEMORRHOIDS.

In complaints of rectal troubles, make diagnosis before you prescribe. If piles, discover what kind, whether external or internal, bleeding or not bleeding, protruding or not protruding. External, inflamed piles require, in a degree, the same treatment as internal; yet the external require an astringent which the internal cannot bear. Bleeding piles need different treatment from those that do not bleed, and protruding piles special treatment, especially if they resist reduction. External piles are of two varieties: (1) external tags of skin; (2) venous tumors. External tags of skin, when inflamed, constitute one of the most painful varieties of piles. An ordinary prescription can do but little good. Ointments cannot be absorbed. The application of heat or cold is productive of more positive results. Use flaxseed poultices or cloths wrung out of hot water and changed often. If heat is unpleasant to the part, apply very cold water in the same way. If an astringent is necessary, make solution of sugar of lead; bowels should be moved daily, salines as good as any. An injection of a quart of cold water will afford some relief. A radical cure consists in the removal of the tumor. Never try to push tumor inside of the rectum. The treatment of internal piles is different from the class just cited. The danger from this class is hemorrhage or strangulation; either may endanger life. An indiscriminate prescription of an ointment accomplishes nothing. Far better is an application of cold water when not protruded. An injection of cold water when not protruded but painful gives more comfort than all the combination of ointments usually prescribed. If, when the person who is troubled with the protrusion of internal piles is directed to take a cold-water injection every morning to move the bowels, to bathe the pile tumor in cold water after an evacuation, anoint the mass with plain vaseline, then push it back, and under no circumstances to use paper as a detergent, much comfort will be gotten out of these directions.

If internal piles both bleed and protrude, a little different treatment is used. The hemorrhage must be looked to. When protruding, an examination can be made, and if no bleeding points are found the following will be found good:

℞ Vaseline..... 1 ounce.
Acetate lead.....20 grains.
Pulv. opii.....15 grains.
Balsam Peru..... 1 drachm.
M. Sig.: Apply to pile after washing with cold water.

If protruding external piles are accompanied with much pain, some complication exists; usually ulceration. Washing with hot water will be found more agreeable, to be followed by the following prescription, which contributes much to relief:

℞ Cocaine..... 7 grains.
Extr. opii.....20 grains.
Extr. belladonnæ.....16 grains.
Lanoline..... 1 ounce.
M. Sig.: Apply after washing. Then return mass.

At bed-time use the following suppository:

℞ Iodoform..... 4 grains.
Morph. sulph.....½ grain.
M. ft. sup. No. 1. Sig.: Insert at bed-time.

Itching is often mistaken for piles; if itching is a most prominent symptom, it will most likely be found to be pruritis If with piles we have an itching of the surrounding parts, the following is suggested:

℞ Vaseline..... 1 ounce.
Ichthyol..... 1 drachm.
M. Sig.: Apply often.

—*Matthew's Med. Quarterly.*

RHINOLITHS: WITH CITATION OF A CASE.

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The semeiological factor of rhinolith is a purulent rhinorrhœa attended with fetor, the degree of which is proportionate to the length of time of lodgment and to the treatment. The treatment may be by either a domestic or a professional detergent. The diagnostic feature recounted may be accompanied, singly or jointly, with frontal, orbital and superior maxillary pain. These pains are not always caused by the obstructive nature of the mass damming the muco-purulent discharge due to inflammatory action and the physiological secretions from the nasal duct. The writer does not wish to claim that the pains are not due to retention of the secretions. He thinks that they are aggravated by the mass becoming firmer and larger, this predicament resulting in peripheral neuritis of the small nerve filaments ramifying over the nasal mucous membrane. The intermittent character of the pain, however, tends to disprove this assertion.

The analytical character of rhinoliths has been largely discussed, but rather unsatisfactorily. The chemical components, according to Demarquay and Bouchardat, consist of the phosphates and carbonates of lime and magnesia, with the chloride of sodium. The latter salt, according to investigation, appears in greater quantity when the rhinolith is in the inferior meatus, occluding the nasal duct. The secretion of the lachrymal glands is chiefly chloride of sodium, therefore the nucleus lodged in the inferior meatus, though small, but increasing in magnitude from the nasal secretions of mucus, fixed phosphate and carbonate of lime, together with a trace of amorphous fats, would be an incentive for the sodium chloride to unite and form a chemical compound of these salines. On the contrary, when the nucleus is in the middle meatus the nasal duct is not occluded unless the rhinolith attains a very large size. Consequently position has considerable influence as to the chemical nature of a rhinolith.

The gouty diathesis is the sole explanation of a rhinolith occurring spontaneously, and in my observation this can only be accounted for by calcareous degeneration, according to the theories of Virchow and Kölliker. These atheromatous conditions usually result in renal calculi or bladder masses. Let me add that a chronic ulcerative inflammation upon the turbinated bones would also produce this condition, but it is rare to see chronic ulcers with cheesy deposits in this region.

McBride speaks of "clots" as forming a nucleus for rhinoliths. A statistical list of this class is not obtainable at present, but it would be interesting to know to what degree epistaxis is directly the cause of rhinolith. From my own observation it is infrequent.

Masses of necrosed bone is responsible for many rhinoliths. These bodies usually form in the accessory cavities—antrum, frontal sinuses, ethmoidal and, rarely, spheroidal cells. From these cavities they find their way into the nose. The aged suffer from this causal factor more than do the young.

Inspissated material is also given a place as a nucleus. But, then, there must be an atrophic condition previous to development of rhinolith. In this category may be mentioned Virchow's process of calcification in disintegrated and cheesy tissue. The author would favor the latter views more readily than the former, since the presence of desiccated mucus is only coincidental. Facts prove that rhinoliths are connected with a hypertrophic rather than an atrophic rhinitis, due unquestionably to the alert and speedy diagnostician, who discovers the foreign mass before it is allowed to develop atrophy. Several cases, however, are on record where the rhinolith was in active accumulation for ten years. I myself have been fortunate enough to see one of nine years' standing.

The size of these extraneous masses varies according to the nuclei and the time length of development; also to the activity of the secretory powers of the patient.

The most likely causal factor—in fact, despite the contention of some authorities, it should be termed to-day *the causation*—is a foreign body. These foreign bodies consist of every conceivable article that

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can be thrust into the nose, from the time the creeping child knows that he has this organ until the freakish pranks of adolescence are passed. Such are beads, beans, shoe-buttons, and a prime favorite among small children are cherry-stones; also may be mentioned the small pebble found on the sand beaches of the fashionable watering resorts.

The nucleus determines the size entirely, for the coating of saline is very slight, even in cases of long standing, not exceeding a covering of two to four millimeters in a decade. But this shell-like covering or coating is not uniform in thickness, for sometimes from the outside of the nucleus to the top of the rhinolith the measurement equals two centimeters. Of course this occurs when the mass is spiculated, and is in reality the measurement of the spicula. Sometimes rhinoliths have attained unusual size. Seiler reports a case in which the length measurement was 3½ inches and the width ¾ of an inch, weighing in all 46 grains. Unfortunately a lithotrite was used to extract this calcareous body and consequently, or in all probability, the nucleus was lost. Some years ago a case was reported by Ashhurst, of the University of Pennsylvania, the weight of the extracted mass being one ounce. Lithotrites, while of absolute necessity in extracting and crushing bodies of large size, are responsible for the deficiency in literature on the subject of rhinoliths; and as a consequence the exact origin is also obliterated, especially if the etiological factor is a nucleus.

The shape of a rhinolith, according to my observation, is entirely dependent upon the nucleus and the position that this foreign body has assumed within the lumen of the nose. For instance, if the nucleus lodges in the inferior meatus, the calcareous mass increases in its spheroidal limits, according to the cast—foreign body—over which the mass is forming, with spicula extending between the inferior surface of the inferior turbinated and the inner surface of the mucous membrane of the superior maxillary bone. Naturally, the molding is modified by the anatomical condition of the internal structure of this organ.

When the nucleus is lodged in the middle meatus the nasal calculus is of a triangular formation, in appearance much like a stellated body, as the spicula projects laterally between the superior margin of the inferior turbinated and the inferior anterior margin of the middle turbinated respectively and posteriorly downward toward the floor of the nose, while a solid calcareous mass usually fills the olfactory cleft. As to the formation of nasal calculi in the accessory cavities, their shapes are rather vague and undoubtedly disguised by assuming, finally, a position in the nasal lumen.

The symptomatology of rhinoliths, as observed by most clinicians, is the usual fetid, sanguineous and unilateral discharge. Double rhinolith is extremely rare. There is no dyscrasia, though I have seen a case of the latter sort, which I will remark later. Pains, if there are any, are as a rule frontal or orbital. Hemorrhage of the nose is not infrequent.

An interesting case is recorded at the Medico-Chirurgical Hospital. The case presented itself to Dr. Arthur H. Cleveland for inspection. The usual prime symptom was uppermost—a fetid discharge from the right nostril accompanied with pain referred to the frontal region.

L. R., age fourteen years; suffering from a catarrhal affection of the right nostril for nine years. The affection was noticed by the mother when the child was five years of age. The probe gave the hard metallic ring upon sounding, thus satisfying the operator that it was not a sequestrum. Further inspection and washing brought to light a well-formed and large-sized calculus, perhaps one and one-half decimeters in diameter, which was removed with little difficulty and was followed by slight hemorrhage. The calculus was a splendid specimen of the spiculated order. The nucleus was found to be a cherry-stone, the result of a childish prank. The dyscrasia which appeared in this case was, I think, due to the irritability and peevishness of the patient—a result of the constant frontal pain. There was some discoloration of the skin covering the angle of the jaws; the nose, which was markedly platyrrhine, was somewhat discolored. A complete recovery followed the extraction.

Signs of the Times.

A man is lingering at the gate—
Some tramp or burglar, maybe;
Oh, no, he is a candidate—
He wants to kiss the baby.

CURRENT LITERATURE REVIEWED.

IN CHARGE OF ELLISON J. MORRIS, M.D., AND SAMUEL M. WILSON, M.D.

THE AMERICAN JOURNAL OF OBSTETRICS

for October. Dr. George H. Rohe, of Catonsville, Md., contributes a paper on

Intestinal Obstruction Following Operations in which the Peritoneal Cavity is Opened.

Obstruction of the bowels causes between 1 and 2 per cent. of the deaths following ovariotomy and other operations involving opening of the peritoneal cavity. The author states that he has been able to collect in the literature and from personal communications no fewer than 75 deaths from this cause. He divides secondary or post-operative intestinal obstruction into two classes of cases, one due to mechanical causes—adhesions, peritoneal bands, volvulus, accidental fixation by sutures, etc., and perhaps compression in exudation masses—and another due to paralysis of peristaltic movement of the intestines following sepsis or injury to the nerve supply of the muscular coat. The obstruction may be acute—*i.e.*, occur immediately after or within a few weeks subsequent to the operation—or it may develop gradually and not become complete until months or years afterward.

The majority of cases in which the cause of the obstruction was ascertained by operation during life or by necropsy, have been found to be due to abnormal fixation of the intestines by adhesions or to compression by peritoneal bands or cords inflammatory in origin. Any hindrance to the passage of the contents of the bowel at the point of flexure causes dilatation above and consequent increase of the degree of flexion. When this occurs there is at first increased peristalsis, but if the obstruction is not soon overcome the circulation is interfered with, dilatation of the bowel with paralysis of its walls follows, and the anatomical picture of the obstruction is complete.

Volvulus sometimes occurs after abdominal section, but probably only after some previous adhesion or constriction of the bowel.

There seems to be no question that by far the larger proportion of cases of post-operative intestinal obstruction are due to adhesions of the intestines to each other, to the abdominal walls, or to other viscera.

The symptoms are essentially the same as those of primary obstruction; but they are often marked by pain, vomiting and tympanites—so frequently present after abdominal operations without being significative of obstruction. Unless the obstruction is due to some untoward occurrence in the technique, the significant symptons are not likely to be present for several days subsequent to the operation. If a patient does well for three or four days or longer after an abdominal section or vaginal extirpation, and is then suddenly attacked by pain followed by vomiting, tympanites and inability to pass feces and flatus, the diagnosis of intestinal obstruction is probable. If the vomiting becomes fecal, the pulse rapid, the urine scanty, and symptoms of collapse set in, the diagnosis becomes reasonably certain. All these symptoms, however, are not uniformly present in obstruction. When the obstruction is high up in the small intestines fecal vomiting is usually absent and distention is likewise less marked. In these cases, also, the bowels may move several times after the pain begins, so that the diagnosis may be more or less uncertain.

An important point is the occurrence of local distention of the bowel above the point of occlusion in mechanical obstruction. This distention begins at the point of obstruction and extends upward along the course of the bowel. In mechanical obstruction, therefore, if the case can be observed from the beginning, there will be found an elastic swelling localized at a point of the abdomen and gradually enlarging, the direction of increase in size being along the course of the constricted bowel above the constriction. The distention is attributed to rapid decomposition of the arrested intestinal contents. Coincident with this local meteorism is an increased peristaltic movement of the bowel, also above the obstruction. In the later stages, particularly if septic peritonitis with paresis of the intestinal walls has occurred, these diagnostic signs are no longer available. In cases of obstruction due to paralysis of the intestine from the beginning (probably always a consequence of septic peritonitis) these symptoms are not present. Here there is a uniform globular distention of the abdomen without movement of the intestines, and without noticeable contours of the bowels through the abdominal walls.

An additional sign is furnished by the urinary reaction. It is claimed that in complete obstruction of the ileum there is always indican in the urine. In obstruction of the colon or high up in the small intestine this reaction is usually not present. The reaction is obtained by boiling a small quantity of the urine in a test-tube and adding nitric acid *guttatim*. The urine turns to a Burgundy-red color, and a similarly colored precipitate is thrown down. If urine yielding this reaction is shaken a violet-colored foam is produced. So long as this remains the case is a grave one. If, after operation for relief of the obstruction, the reaction persists, the obstruction has not been removed. In cases where the obstruction is relieved the reaction disappears within twenty-four hours. While this sign must be regarded as a very important one, it is not absolutely pathognomonic,

as a similar reaction occurs in some other morbid conditions.

The prognosis of primary intestinal obstruction is sufficiently grave. Following closely upon an operation so serious as abdominal section or vaginal extirpation of the uterus, this gravity is enormously increased. The abdominal surgeon should therefore be prepared to promptly recognize and appropriately treat this unwelcome complication. The knife is not always to be resorted to at once in the treatment of this condition, but when other means fail to give relief the surgeon should not hesitate to operate, as delay, in cases not otherwise curable, always increases the danger of operative measures. Cases occur where the symptoms may point to obstruction by means of adhesions, peritoneal bands or volvulus, and yet there is a possibility that there may be simply functional obstruction. In such cases other means may be tried until it is found that they are ineffective.

The author condemns the so-called "medical treatment" by means of opium or drastic purgatives. But certain procedures are frequently indicated, and though they are not often curative, certainly give temporary relief. Such measures are stomach-washing, rectal inflation of gas or air and injections of fluids. In stomach-washing some mild antiseptic lotion containing boric acid should be used. The lavage may be repeated every four to six hours as the vomiting or distention demands. The author also mentions the following method of Klotz: As soon as symptoms of obstruction appear the stomach is washed out with from four to six quarts of warm salt solution. Should this fail to relieve the symptoms it is repeated and a large dose (one and a half to two ounces) of castor oil is passed into the stomach through a tube. In all cases so treated by Klotz the active peristaltic movements set up caused passage of flatus and feces within ten hours. Evidently it is only in cases of fresh and friable adhesions that this method can be successful.

Rectal injections of water or air may at times be curative when the obstruction is due to intussusception, volvulus or to soft adhesions of the lower portion of the intestine, but where the obstruction is due to cords or bands they can manifestly be of no avail. They should therefore not be pushed beyond a reasonable trial. Care must be taken not to use too much pressure in making rectal injections, for fear of rupturing the bowel. Attempts to force the ileo-cecal valve must be regarded always as ill-advised. Too much care cannot be used in passing a rectal tube high up into the colon, as the author has seen one instance of perforation of the sigmoid flexure where this was attempted.

The rational treatment of intestinal obstruction following abdominal section is to reopen the abdomen, seek for the place of obstruction, relieve the same by separating adhesions, dividing constricting bands or untwisting a volvulus. If the gut is much distended an incision to let out the gas and fluid feces may be made and the bowel afterward carefully sutured. Gangrenous intestine must be resected and the ends joined by suture or Murphy's button. If the obstruction is due to a volvulus it would probably be always advisable to resect the twisted portion of the gut, as the volvulus is extremely likely to recur.

When practicable it is probably always best to make the incision in the middle line, as it permits more thorough and ready exploration of the abdominal cavity. Search should first be made for the obstruction in the iliac regions, as here obstruction is most likely to occur. If not found in either of the iliac fossæ and if it cannot be located by local distention, the entire length of the intestine must be passed through the fingers until the constriction is found. As it not infrequently happens that there is more than one point of constriction, the examination should be thorough.

The Relation of Hysteria to Structural Changes in the Uterus and its Adnexa

is discussed by Augustus P. Clarke, A.M., M.D., of Cambridge, Mass. From his own observation and experience gained in the treatment of cases of hysteria, the following propositions have been formulated:

That in the large proportion of cases of genuine hysteria there exists some distinct and tangible lesion of the uterus, appendages, or of parts immediately connected, and that the hysterical phenomena resulting from such organic disturbance will not yield until definite measures have been instituted for overcoming the original malady.

That in some cases the impoverishment of the blood and other constitutional influences may give rise to paroxysms of hysteria.

That these attacks are often transient, much more mild, and when properly treated by constitutional measures may disappear altogether.

That in those more obstinate cases of nervous perversion in which there may exist to a greater or less extent hyperesthesia, anesthesia, analgesia, and the like, the disease may not be necessarily dependent on factors giving rise to the disease in question, but may be of the nature of epilepsy or of insanity, or be dependent in whole or in part on morbid processes connected with some portion of the sensorium.

That the diagnosis of such cerebral lesions will be strengthened when, in the absence of a manifest organic disturbance of the genital tract, there is a history of a severe blow or injury to the head, or of influences or factors which have produced a profound or prolonged impression on the encephalic centers.

That in hysteria, on the other hand, none of these conditions exists; the phenomena are merely the result of reflex movements which occur for the most part during the period of the greatest activity of the organs of reproduction. That at such a time a seemingly limited amount of tumefaction, or an adhesion of a tube or ovary, or an adventitious change in the shape or relation of the uterus, is capable of effecting constitutional as well as local disturbances of the nervous centers.

That though hereditary predisposition may

to some extent be an exciting cause of hysteria, such an influence as an original factor should nevertheless be regarded as unimportant.

That when hysteria occurs later in life it is *prima facie* evidence that the genital tract has become diseased or has taken on a preternatural condition.

That if, after careful examination, such a diagnosis of local physical obliquity cannot be established, we should, though the patient suffers from perverted sensations referable to the nervous tracts, be suspicious that disease has taken lodgment in some portion of the encephalon or the organism under a more immediate control of the central nervous system.

C. C. Frederick, B.S., M D., Adjunct Professor of Obstetrics, Medical Department Niagara University, etc., Buffalo, N. Y., discusses

The Relations of the Minor to the Major Diseases of Women.

In regard to which are the minor and which the major diseases of women, he considers malignant disease of the uterus, and any condition or growth of the pelvic organs which necessitates opening of the peritoneum for its cure, a major disease. All the rest are minor. The principal minor defects of the female genitalia consist of lacerations of the perineum and pelvic floor, lacerations of the cervix and backward or downward displacements of the uterus. These tend to produce an endometritis or to aggravate a diseased endometrium and favor the development of endometrial septic processes and their deleterious effects. The author admits that a torn perineum may exist for years without discomfort to the patient or any visible effects on her pelvic organs. So long as it does no harm it needs operation only as a preventive measure. When the uterus becomes misplaced as a consequence of the tear the displacement should be corrected by means of a pessary, or if this will not be retained the perineum must be repaired. If a cystocele or rectocele exist, anterior and posterior colporrhaphy should be done at the same time as the perineorrhaphy. A lacerated cervix, with ectropion and hypertrophy of the lips, is one of the most fertile sources of disease of the endometrium. Soothing applications give only temporary relief. The only permanent relief is to be had by curetting the uterus and repairing the laceration. Then replace the uterus and hold it in position till involution occurs, and the cure will be complete. The author takes a firm stand against intra-uterine medication as useless and often positively harmful as ordinarily practiced. It may be safely said that the dirty sound and intra-uterine medication have caused more serious disease in women than the conditions for which the treatment was given would ever have caused.

In the treatment of these cases constitutional treatment should not be forgotten. Tonic treatment will do much for some of these cases. The author states that he has often seen several malarial subjects with profuse uterine catarrh entirely cured by anti-malarial treatment.

True endometritis is best treated by thorough dilatation of the cervical canal, removal of the diseased membrane with the sharp curette and thorough disinfection of the cavity. It may then be packed with iodoform gauze to insure good drainage. The author insists that, in spite of all that has been written to the contrary, the operation is as safe as any in gynecology, provided there is no extensive disease of the uterine appendages. Of course the operation is to be done with full antiseptic precautions.

The author closes his paper as follows: "Prevent puerperal infection by practicing antiseptic midwifery; discourage abortions on the part of your patients; have your patients' lacerated cervices and perinei repaired before they lead to diseased conditions; build up your female patients' general health; do very little or no intra-uterine medication; cure their endometritis, whether due to gonorrhœa or other causes; correct displacements, if there be no chronic tubal or ovarian trouble or adhesions, and you will prevent much of the pelvic disease for which hundreds of capital operations are done every week, and you will have answered the question, 'What can I do to prevent so much pelvic disease?'"

Dr. J. H. Carstens, Professor of Obstetrics and Clinical Gynecology in the Detroit College of Medicine, etc., contributes a paper on

The Incision in Abdominal Surgery.

A summing up of the author's methods is as follows:

1. With a small, narrow-bladed, sharp knife make a clean incision through the skin of the necessary length, and with another sweep (or two) cut through the linea alba, muscle, etc. Lift the peritoneum with your fingers, open it and enlarge the incision. The use of forceps to lift the tissues, or the grooved directors, is unnecessary.

2. In closing the abdominal incision use animal ligature, kangaroo tendon or catgut. First carefully bring together the peritoneum in a running stitch, then the transversalis fascia, and the rectus if the incision is through this muscle. Then most carefully bring together—edge to edge—the tendinous insertion of the oblique muscles. The loose cellular tissue above and fat can be brought together in one or two tiers, according to thickness. Bring the skin together carefully with Marcy's cobbler's stitch, thus burying all your sutures.

3. Then seal with collodion, and if everything connected with the operation has been perfectly antiseptic, absolute primary union will take place, the different layers of the abdominal wall will have been brought together as nearly as possible as they were in the first place, and no hernia will result.

4. In cases of extensive umbilical, ventral or other hernia it is best to bring the peritoneum together with an over-and-over stitch of kangaroo tendon or catgut; to make a flap-splitting operation of the ring, which is brought together with silkworm gut or silver wire, which is buried, and then the fat and

skin are united with the buried animal suture.

Two papers appear in this issue on

Catheterization of the Fallopian Tubes.

The author of the first paper, Llewellyn Eliot, A.M., M.D., of Washington, D. C., discusses two propositions: 1. It is possible to catheterize the Fallopian tubes. 2. The possibility being established, the attempt to treat cases of diseased tubes by applications made directly to their surfaces is justifiable. The author quotes cases to prove that the first proposition is true and therefore the second becomes self-evident. Still he is obliged to confess that it is not possible to catheterize the tubes in every instance, and that the procedure is not free from danger. The method is applicable, he thinks, to those cases of salpingitis, hydro- and pyo-salpinx which refuse operation.

The second paper on this subject is from the pen of William P. Carr, M.D., of Washington, D. C., and in it the author enters into the dangers of the procedure and cautions against perforation of the uterine or tubal wall, or the forcing of pus into the peritoneal cavity. With its limitations he cannot predict a brilliant future for the operation.

Two papers are also devoted to the subject of

Puerperal Insanity.

The first, by George Byrd Harrison, M.D., of Washington, D.C., deals with the causation and symptoms of the disease. Of the symptomatology of puerperal insanity he says that there is none *per se*. Of course with the aid of physical examination and other outside proof, we may differentiate the mania and melancholia associated with the childbed state from the other and commoner forms of the same disease. But they have no positive characters of their own. Even the "consciousness of a delusion," which has been elaborately dwelt upon, can scarcely be accepted as a shibboleth. Examination of the patient and the history of the case can alone be relied upon for differential diagnosis.

The second paper, by William Mercer Sprigg, M.D., Professor of Physiology, Medical Department National University, Washington, D C., deals with the prognosis and treatment of the disorder. The early routine treatment of these cases by blood-letting, purging, blistering, etc., is interesting only as a relic of the past. The breasts usually do not require attention, as nature, without assistance, shuts off the supply of milk. Abscess of the breast in this condition is most unusual. The anemia should be treated with food and the iron preparations, together with good hygiene, sunlight and fresh air. The bowels should be kept open daily. If the iron preparations fail in their effect Fowler's solution of arsenic might be used. Sedatives and hypnotics should be used with caution, as a supporting, not a depressing, treatment is indicated. In severe cases with coated tongue, great nervous and vascular depression, neither opium nor chloral should be used. Morphia, hypodermically, a single full dose at bed-time, will usually insure rest. A hot bath, followed by a good rubbing and a glass of hot milk, will sometimes have a very quieting effect if given at bed-time. Hydrobromate of hyoscine has been used hypodermically with good results. The bromide salts have a prominent place in the treatment. Stimulants should be given when the pulse is weak and nutrition defective—and given for physical and not for mental effect on the patient. Mental diversion or entertainment should occupy an important place in the treatment. The bringing on of premature labor is to be condemned.

Eugene Boise, M.D., of Grand Rapids, Mich., discusses "The Cause of the Thirst Following Abdominal Sections." The theory advanced is that it is caused by contraction of the arterioles of the abdominal viscera, and consequent lessened tension in their capillaries and compensatory withdrawal of water from their tissues, all of which is due to the irritation of the abdominal sympathetic nerves during the operation.

The remaining papers in this issue are: "Stray Thoughts on the Mechanism of Labor," by A. F. A. King, M.D., Washington, D.C. "One Year's Death Record in Abdominal Surgery," by J. H. Carstens, Detroit, Mich. "The Management of an Ordinary Case of Labor in Hospital and in Private Practice," by Francis Smith Nash, M.D., Washington, D.C.

IN THE BRITISH JOURNAL OF DERMATOLOGY for October Dr. W. Allan Jamieson writes of

Some Rare Skin Diseases.

The author was consulted by a man of 55 years, rather fat; had been accustomed to use alcohol; was subject to rheumatic gout, but had enjoyed pretty good health. Of late the patient had tired easily, slept poorly, arose in the morning with a thickly coated tongue. His appetite had been failing for about one year, and although he consumed considerable liquid it was not owing to any great thirst.

The dimensions of the liver and the action of the bowels seemed normal. Urine was acid, copious, sp. gr. 1.010, without deposit or discoverable tube casts, but containing small quantities of sugar and albumen.

An irritable eruption was complained of; had appeared two or three years before; itched always, but worse at night. Examination showed a discrete, symmetrical eruption of oval or stellate form, solid elevations, some almost the size of a split pea. The color was pinkish or reddish-brown, sometimes with a yellowish or brownish marginal line around a pink center. They did not wholly vanish on pressure. The hands, face and mucous membranes were free, but the outer aspects of the forearms, the shoulders, back and, to a less extent, the chest and abdomen were affected. The flanks contained a couple of leucodermic areas.

The patient was ordered to stop arsenic, which he had been using, was put on a selected diet, told to wash with menthol soap in the morning, and to apply at night a solution of one part ichthyol in three of water, and to take a pill of a quarter of a grain each

of codeine and extract of lactucarium and one-half grain of extract of nux vomica. He improved under this, but the dose of codeine could not be increased. The symptoms all improved, but after the rash had disappeared with the exception of a few stains, sugar and albumen might still be found in the urine.

Xanthoma diabeticorum usually selects the knees, elbows and buttocks, and the eruption when colored is usually yellow. None of these characteristics appeared in this case.

One authority states that the eruption may lose the yellow color as it grows older, but even the new spots in this case were pink.

A case of hydroa vacciniforme sen æstivale is reported, peculiar in the patient being a girl of eight years, and with very great scarring from healed vesicles. The application of borated starch poultices, followed by painting with zinc-ichthyol jelly, seemed beneficial, but the case passed from observation.

Another case reported was a woman 54 years old, in whom the menopause occurred four years previously, who complained of itchiness and burning heat in the vulva. It was found that a patch of scleroderma contracted the arms and passed forward on the perineum, and had caused a linear ulcer. A small patch of scleroderma was found on the prepuce of the clitoris, another on the right leg, running from the patella half-way to the ankle, a large patch over the ribs on each side (in front), and two more above each clavicle, looking like inlaid ivory.

Dr. Stephen Mackenzie had a paper on

Acne.

which was freely discussed.

The disease he thinks due to faulty secretion by the sebaceous glands, consequen-plugging of the ducts and inflammation from retained secretion.

The treatment he thought should be strictly local and should consist in the removal of superfluous sebum and epithelial accumulations; stimulation of the glands to healthy activity; keeping the skin aseptic to exclude pus cocci. Various medicated soaps met the requirements thoroughly, and should be accompanied by bathing the face in hot water and steaming.

Ointments and lotions are useful to allay inflammation, zinc and belladonna being noteworthy in this class.

During the discussion, most of those present seemed to think that, if not dependent on constipation and indigestion, acne was usually accompanied by these disorders, and the cure was hastened by appropriate treatment for these.

IN THE JOURNAL OF CUTANEOUS AND GENITO-URINARY DISEASES

for October Dr. William H. Kingston writes of

Stone in the Bladder—Choice of Operation.

The author's experience leads him to think that in all cases where the urethra will admit or can be made to admit a lithotrite, litholopaxy is superior to cutting; that this method is applicable to older men and to younger children than it was formerly thought to be, and that improved instruments permit the crushing of larger and harder calculi than formerly; that in women dilatation of the urethra is usually sufficient to permit extraction without crushing; that in those cases where the size of the calculus is doubtful and cutting is found necessary, it is more prudent to choose the suprapubic operation, as the stone might be too large for the lateral incision. When cutting is necessary the author expresses himself in favor of the lateral incision when practicable, but fails to state what circumstances would cause him to choose this, in adults, instead of litholopaxy. It appears objectionable to break a stone before removing through an incision.

Dr. George Thomas Jackson writes of

Thyroid Feeding in Diseases of the Skin.

The author used thyroid preparations in a few cases of xeroderma and dermatitis exfoliativa, and finding unpleasant constitutional symptoms from the drug and no permanent improvement in the disease, thinks this treatment unsuited to anything so trivial as a skin affection.

Drs. J. Abbott Cantrell and Emanuel J. Stout conclude their paper on "Favus of the Head and Body."

Erysipelas.

During a long practice I have found the following local application most excellent:

℞ Aquæ puræ ..... Oj.
Ferri sulphatis. q. s. facere solutioneum ad saturandum.
M. Sig.: Keep a cloth wet with the mixture to the parts affected.

℞ Iodoformi ..... ʒj.
Olei rosæ ..... gtt v.
Collodion ..... ʒx.
M. Sig.: Use as a local application four or five times daily. The burning pain is relieved at once.

℞ Acidi carbolici (liquid) ..... } āā ʒj.
Spir. vini rectificati ..... }
Tincturæ iodini ..... }
Olei terebinthinæ ..... ʒij.
Glycerini ..... ʒv.
M. Sig.: Paint parts affected three or four times daily.

℞ Salol ..... ʒij.
Iodoi ..... ʒj.
Glycerini ..... } āā ʒj.
Collodion ..... }
M. Sig.: Apply to affected surface three or four times daily.

—*Dr. N.B. Kennedy in the Texas Sanitarium*

Chronic Conjunctivitis of Eczematous Patients.

Dr. Von Sehlen (*La Semaine Medicale*) speaks highly of the following salve in the occasionally chronic conjunctivitis of eczema:

℞ Ichthyol	0.20-50	o (grs. iij-viij).
Powdered starch	10	o āā (ʒijss).
Oxide zinc		
Vaseline	25	o (ʒvj).

Mix very carefully.

The salve is applied to the palpebral conjunctiva by means of a little glass rod. If it has been well mixed and the ichthyol be equally distributed through the vaseline, only a slight burning sensation will be experienced. Under its influence obstinate eczematous conjunctivitis, often leading to ectropion, will be rapidly cured—*Pritchard.*

PERISCOPE.

IN CHARGE OF WM. E. PARKE, A.M., M.D.

MEDICINE

An Old Medical Protest Against Railroad Trains.

According to *La Medecine Moderne*, there is preserved at Nuremberg, in the archives of the first railroad company built in Germany, a protest offered at the time of the construction of the line, by the physicians of Bavaria. Among other reasons given for opposing the scheme is this psychological one: "Traveling in vehicles drawn by a locomotive ought to be forbidden in the interest of public health. The rapid motion cannot fail to produce in the passengers the mental affection known as *delirium furiosum*. Even when travelers consent to expose themselves to this danger, the government at least is in duty bound to protect the public. A single glance thrown upon a locomotive passing at great speed is sufficient to cause the same cerebral derangement. It is accordingly absolutely necessary to build a fence three meters high on each side of the railway tracks."—*Boston Medical and Surgical Journal.*

Methyl-violet in Diphtheria.

Methyl-violet is practically unirritating to the faucial and gastric mucous membranes, and can be used in almost any desired strength as a topical application, or may be administered internally in pill form in doses of one-tenth grain to one grain, from one to three times a day.

As a local application to the throat in diphtheria a solution is used, the strength of which may vary from one to ten per cent., usually a two per cent. solution. The effort is made to apply the solution, by means of a cotton swab, as accurately as possible to the diseased area. It is not, however, possible to limit the agent in most cases to the diseased spot, but the healthy mucous membrane becomes deeply stained by the agent.

It was used in twenty-six cases of diphtheria and only two died, both of which had laryngeal involvement.—*W. P. Munn (Denver, Col.) in Pittsburg Med. Rev.*

The Glycosuria of Pregnancy.

It is as well to know that the appearance of sugar in the urine of puerperal women is not, *per se*, to be accepted as evidence of any morbid condition calling for urgent measures. Sugar, in greater or lesser amount, is present, according to Dr. Lewers, in the urine of most puerperal women, but even when comparatively abundant its presence was not associated with the classic collateral symptoms of glycosuria. The amount indeed stands in some sort of relationship to the lacteal secretion, or rather excretion; when the flow is free, whether copious or otherwise, the amount of sugar discoverable in the urine is small. If, however, the output of milk is checked in any way, mechanically or otherwise, a certain proportion of the lactose is eliminated by the kidneys, giving rise to passing glycosuria. Belladonna, probably by reason of its effect in diminishing the excretion of milk, increases the percentage of urinary sugar. It is to be supposed that the glycosuria disappears when lactation comes to an end, but as a matter of fact it has seldom been possible to continue the observations a sufficient length of time to ascertain it by direct examination.—*Medical Record.*

The Dietetic Treatment of Phthisis.

Dr. Henry P. Loomis formulates the following rules:

1. Never take cough mixtures if they can possibly be avoided
2. Food should be taken at least six times in the twenty-four hours; light repasts between the meals and on retiring.
3. Never eat when suffering from bodily or mental fatigue or nervous excitement.
4. Take a nap or at least lie down for twenty minutes before the mid-day and evening meals.
5. Take only a small amount of fluids with the meals.
6. The starches and sugars should be avoided; also indigestible articles of diet.
7. As far as possible each meal should consist of articles requiring about the same time to digest.
8. Only eat so much as can be easily and fully digested in the time allowed.
9. As long as possible systematic exercise should be taken to favor assimilation and excretion; when this is impossible, massage or passive exercise should be undergone.
10. The food must be nicely prepared and daintily served—made inviting in every way.

He proposes the following as a diet-sheet in the early stage: On awakening, eight ounces of equal parts of milk and seltzer, taken slowly through half an hour. Breakfast: Oatmeal and cracked wheat with a little sugar and an abundance of cream, rare steak or loin chop with fat, soft-boiled or poached egg, cream-toast, half pint of milk, small cup of coffee. Early lunch: Half pint of milk or small teacup of squeezed beef-juice with stale bread. Mid-day meal: Fish, broiled or stewed chicken, scraped meat ball, stale bread and plenty of butter, baked apples and cream, two glasses of milk. Afternoon lunch: Bottle of kumyss, raw scraped beef sandwich, or goblet of milk. Dinner: Substantial meat or fish soup, rare roast beef or mutton, game,

slice of stale bread, spinach, cauliflower, fresh vegetables in season (sparingly).—*The Practitioner.*

The Treatment of Sciatica.

Dr. Græme M. Hammond, of New York (*Post-Graduate*), discusses the treatment of rheumatic sciatica, or that arising from cold. In mild cases, ten or fifteen grains of phenacetine will usually afford relief; but in many cases this will not suffice Morphia should be given under the skin, and injected deeply into the part. Enough should be given to afford complete relief, as this seems to have a special action on the course of the disease. Perfect rest in bed will cut many cases short that might otherwise be very obstinate. The constant application of heat, as in hot rubber bags, is of the greatest value. The constant electric current is also an agent of much value in the treatment of these cases. Patients feel relief after each application.—*Dominion Med. Monthly.*

The Action of Calomel and Olive Oil.

Victor Schultz (*Berliner klinische Wochenschrift*) has noticed that in a patient upon whom a necropsy demonstrated that no gall-stones existed, a few hours after the administration of olive oil the gall-bladder, which up to that time had been soft and insensitive, became very tense, sensitive and painful, and then acquired that degree of painfulness which could be characterized as gall-stone colic. The significance of the fact is that the ingestion of olive oil is followed by a marked excretion of bile. As regards calomel, it has no influence upon a markedly increased biliary excretion; but rather, in gall-stones and diseases of the biliary passages, it acts not by increasing the biliary excretion, but by its disinfecting properties, thus diminishing the abnormal irritation of the mucous membrane of the gall-bladder.—*American Journal Med. Sciences.*

A Medical Library Association has been recently organized in Grand Rapids, Mich. The purpose of the association is the formation of a reference library upon medicine and allied sciences. The new organization starts out with a membership of about fifty, composed not alone of physicians, but dentists and pharmacists as well.

One of the features of the association will be the admission of non-residents to membership, whereby for a small annual fee physicians outside of the city may avail themselves of the advantages of the library.

A competent librarian will be secured and the most approved methods of cataloguing and indexing will be made use of. Books and journals are being liberally donated by those interested in the project, and the success of the enterprise is assured.

The following officers have been elected: Dr. G. K. Johnson, President; Dr. S. G. Milner, Vice-President; Dr. W. A. Dorland, Treasurer; Dr. Reuben Peterson, Secretary.

Terpene Hydrate in Bronchial Catarrh.

Dr. Murrell is desirous once more of calling attention to the value of terpene hydrate in the treatment of affections of bronchial and nasal mucous membranes. Its properties have been well known for many years, but in this country it has never been a popular remedy, and its claims seem to have been overlooked in favor of pure terebene and other similar compounds. It is a hydrate of turpentine, and is made by treating oil of turpentine with nitric acid and alcohol. It is a solid, and has somewhat the appearance of chloral hydrate. Its odor, which is slight, resembles that of pure terebene. For some months past he has prescribed it in solution containing five grains to the half ounce, made up with simple elixir and flavored either with tincture of Virginia prune and syrup of tar, or with the aqua laurocerasi. Terpene not only relieves cough and lessens bronchial secretion, but is a diuretic, and has been used with advantage in neuralgia. *La Tribune Medicale* recommends the following pill:

℞ Creosote... ..... } ää gr. j.
Terpene hydrate..... .... }
Iodoform..... }

Ft. pil. no. 1. Sig.: One pill three times a day, together with an inhalation of about two per cent. solution of eucalyptol every two hours.

—*Southern Clinic.*

Chloroform in the Treatment of Chorea.

When the convulsive movements of chorea are of sufficient severity to interfere with the indigestion of food, or sleep is prevented by the attacks, there is great danger of rapid exhaustion, and even death may be apprehended. In such cases chloroform will prove a veritable boon. Not only will the anæsthetic induce perfect relaxation and relief from the present attack, but the insensibility produced by it often passes into natural sleep, and the patient awakes refreshed and completely rested, with marked abatement of the hitherto constant movements. The improvement in some cases is marvelous. Not only is the sufferer allowed a much-needed rest by this means, but the attacks are delayed, their intensity mitigated, nourishment may be taken with relish, and a decided change in condition results. In the beginning, it may be necessary to use the chloroform three or four times daily, but as improvement occurs, only one administration in the twenty-four hours will be found necessary. Usually a month is required before the permanency of the cure is established.—*Louisville Medical Journal.*

Sterility.

Palmer: Gonorrhœa is one of the most frequent, even the most frequent, causes of sterility in the female; it exists often when not expected. Aside from gonorrhœa the most common cause is an imperfect development of the uterus. The organ is small, the cervix is elongated and concial, there is a pinhole os externum, and often anteflexion. Years

ago the treatment of the conoid cervix and pinhole os externum was to incise it; then followed the use of tents, but I think these have pretty well gone out of use; then came dilatation by means of the metallic dilator; and since we have had dilatation by means of galvanism. I have had several cases in the last ten years in which conception has followed the use of galvanism. In all cases there was more or less of conoid cervix and pinhole os externum. The case to which I particularly refer was one sent to me years ago. She had no leucorrhœa and was in good general health. I commenced the dilatation of the os externum and the cervical canal by means of galvanism. I passed one electrode through the canal and placed the other over the abdomen. The current was applied fifteen minutes twice a week for several months. After a married sterile life of seven or eight years she is now pregnant in her eighth month. I have seen similar results follow this treatment in other cases. The negative pole is used when one wishes to expand the cervical canal; the positive is a hæmostatic. I am disposed to think this is one the best methods of treatment in these cases, because it is comparatively painless, because it is comparatively safe, and because it leads to permanency of results which is not otherwise obtained.—*Arch. Gyn.*

Intracapsular Fractures.

Dr. Bedford Brown, of Alexandria, Va., gave the result of his experience with fourteen cases of femur, in a paper before A. M. A. He believes a good rule to work by in treating intracapsular fractures of the cervix femoris in the aged, is to so manage the case from the beginning as not to expect union of the fractured bones, but on the contrary to so conduct the management of the case as will, if possible, insure a good, strong false joint, by which after a time the patient can regain a fair degree of locomotion for the balance of life. To bring about this desirable object, the pelvis from the anterior superior spinous process is enveloped with a broad flannel roller four inches wide and fifteen feet long, applied down below the trochanters. This flannel bandage gives comfort by the support that it affords the fractured bones, and the prevention of too much motion, and gives opportunity to the soft parts involved to throw out adhesive exudations. This is the full extent of the apparatus to be applied. As for the balance of treatment, pillows long and short, small and large, are to be relied on for splints and supports. Comfort of position is to be the guiding rule in the management of this class of cases. The ingenuity of surgeon and nurse will be taxed to so arrange the pillow splints as to insure comfort, relieve pain and secure sleep. When these objects are accomplished all has been accomplished that judgment and experience can do until inflammatory action subsides and the process of fibrinous exudation is completed, and then the false joint is ready for use. To attempt, on the contrary, to confine this class of patients in a stiff apparatus with a view of accomplishing that which no power can eve effect—a union of bone or ligament—is to condemn our patient not only to unnecessary suffering, but to certain death.—*Richmond Jour. Practice.*

Paralysis of the Elevators and Depressors of the Eyeball.

Dr. Charles Wray in the London *Lancet*, gives two simple methods of pointing out the action of the four muscles involved in elevating and depressing the eye, and the situation of the false images when they are paralyzed. The action of each muscle, and the inclination of the false image when the muscle is paralyzed, are represented by four radii drawn from the center of the cornea, and forming a figure like the capital letter X.

For the examination of the action of these muscles the author sets forth the four following rules, which enable one to rapidly diagnose which muscle is paralyzed:

1. If the diplopia exists in the upper portion of the field of vision, the upper image belongs to the eye paralyzed.
2. If there is diplopia in the lower portion of the visual field, the lower image belongs to the eye paralyzed.
3. The paralysis of an oblique muscle gives rise to an internal strabismus and homonymous diplopia.
4. The paralysis of a straight muscle gives rise to an internal strabismus and crossed diplopia.

Treatment of Whooping-Cough.

Dr. G. Variot (*Lo Sperimentale*) has obtained notable advantages in the treatment of pertussis by the administration three times a day, in a little sweetened milk, of a teaspoonful of the following:

℞
Aq. dest.....8 ounces.
Potassii bromidi.....2 drachms.
Tinct. valerian.....2 drachms.

In children below two years a teaspoonful will suffice. An hour after this dose he gives a teaspoonful of the syrup of turpentine. The turpentine acts as a balsamic and the other drugs as anti-spasmodics. The presence of rales in the chest indicates ipecac in the powder form, a dose every morning to favor expectoration. Keep the child in the open air while there are no serious broncho-pulmonary symptoms. As a diet keep the child on albuminoids and meat, eggs, raw meat, extract of beef, etc., to which may be added some tonic, as the wine of cinchona or the syrup of the lactophosphate of lime.—*Lancet-Clinic.*

Thuja in Exophthalmic Goitre.

Dr. C. Sargent, of Taos, N. M., claims excellent results from treatment of exophthalmic goitre, with enlargement of thyroid the size of a hen's egg, with thuja occidentalis. In a brief period of time the result was marked by "no more eye trouble, no palpitation of the heart and the enlargement of the thyroid all gone."—*Med. Standard.*

SURGERY.

A New Operation for Procidentia Uteri.

In a short preliminary Dr. H. W. Freund (*Central. f. Gynæcol.*) calls attention to two cases of procidentia uteri cured by means of silver-wire sutures circularly drawn underneath the mucous membrane of the vagina. The sutures are placed in such a manner as to form a supporting pillar to the uterus, and tightened sufficiently to prevent prolapsus after replacement. The technique is simple. The silver wires, usually four or five in number, are drawn by means of a curved needle underneath the mucous membrane of the vagina, the first wire being about one inch from the os externum. The wire is carried underneath the mucous membrane to its full circumference, always re-entering the puncture of exit until it reaches the first puncture, when the portio vaginalis is pushed back by an assistant and the wire drawn tight, twisted and allowed to sink beneath the mucous membrane. In distances of three-fourths of an inch the sutures are introduced until the vagina is reinverted and the uterus replaced. Care must be taken not to allow any of the wire to lie on the surface lest suppuration and necrosis should follow.

In the two cases reported only local anesthesia was resorted to and the results were highly gratifying. The cases operated upon had both passed the menopause, and the author questions the advisability of using this procedure on women liable to become pregnant.—*Cincinnati Lancet Clinic.*

Cauterization of the Nares and Accidents that may Follow.

Dr. E. F. Ingals, of Chicago, believed that, when properly done, this operation is quite as free from discomfort or danger as any other minor surgical procedure. Serious results were due to carelessness or inexperience upon the part of the operator, which induced him to make extensive wounds or to repeat burnings too frequently. He summarized his conclusions as follows: 1. It is important that antiseptic applications be regularly employed after cauterization of the nasal mucous membrane, and that the nostril be closed by cotton for several days, whenever the patient is out of doors, to prevent taking cold. 2. As a rule, at least two weeks should intervene between operations upon opposite sides, and three or four weeks between those on the same side. 3. No serious results are at all likely to follow cauterizations made in this way. 4. Practically, all cases of hypertrophic or intumescent rhinitis may be cured by this treatment, though occasionally portions of the turbinated body must be removed. —*Journal American Medical Association.*

Treatment of Inoperable Malignant Tumors.

Dr. W. B. Coley, New York, in a paper before the meeting of the American Surgical Association, in Washington, D. C., reported twenty-five cases of sarcoma treated by inoculating the patient with the toxines of erysipelas and bacillus prodigiosus, with six cures. Nine markedly improved and eight slightly improved. Also eight cancer cases, all but one of which showed improvement. The author's conclusions were as follows:

First.—The curative action of erysipelas upon malignant tumors is an established fact.

Second.—This action is much more powerful on sarcoma than carcinoma.

Third.—This action is chiefly due to the soluble toxines of the erysipelas streptococcus, which toxines may be isolated and used with safety and accuracy.

Fourth.—This action is greatly increased by the addition of the toxines of bacillus prodigiosus.

Fifth.— The toxines, to be of value, must come from very virulent cultures and must be freshly prepared.

Sixth.—The results obtained from the use of these toxines, without danger, are so nearly, if not quite, equal to those obtained from an attack of erysipelas, that inoculation should rarely be resorted to.—*International Journal of Surgery.*

OBSTETRICS.

Concerning the Treatment of Abortion.

Eckstein (*Prager medicinische Wochenschrift*), as assistant in Martin's clinic, has had opportunity to study sixty cases of abortion treated by Martin's principles in his private clinic in Berlin. He attaches the greatest importance in the curettage of the uterus to the thorough emptying of the tubal angles, as remains of placenta or portions of membranes are especially liable to be attached there. In nearly all the cases Eckstein followed a manual or instrumental emptying of the uterus with curettage, by the idea that an imperfect separation of the decidua and a consequent endometritis is thereby to be prevented. The results of this method were very satisfactory. From his experience he deducts the following:

1. The instrumental method of the treatment of abortion is the only rational one.

2. The recognition of the cause of bleeding from the uterus is of the greatest importance, and therefore in every uterine hemorrhage a careful examination should be made.

3. Ergot and similar drugs should only be used when the uterus is empty.

4. If abortion is in progress, a tamponade of the vagina is only indicated when there is no dilatation of the os uteri.

5. When the dilatation of the os is sufficient, the emptying of the uterus, in spontaneous abortion, is indicated.

6. In large embryos, from the fifth month on, one conducts the abortion as in labor at term.

7. In abortion attended with fever and the decomposition of the product, the uterus should be emptied of its contents as quickly as possible.

8. A thorough curettage of the endometrium should follow every emptying of the uterus in abortion.— *Western Med. Reporter.*

Vinum Ipecacuanhæ as an Oxytocic.

A contributor to the *Brit. Med. Jour.* says: "In the course of general practice extending over many years I invariably carried a bottle of vinum ipecacuanhæ in my midwifery bag, and rarely, if ever, gave a dose of ergot in the first stage of labor. Time after time on coming to a confinement case where the pains had been feeble and inefficient or had totally ceased, two or three 10 or 15 minim doses of the wine at intervals of ten minutes had been followed in a surprisingly short time by energetic uterine action, with a rapid termination of the labor. It never produces the quasi-tetanic contraction so often met with as the result of ergot, the pains continuing to recur regularly, just as they do in natural labor, but with greater force and at shorter intervals. Conviction of the value of the drug for this purpose induces me to give my experience of it, believing that its merits will be recognized by any one who chooses to give it a trial."—*Med. Times.*

PATHOLOGY.

What We May See in the Sputum.

Microscopical examinations have so far superseded the older methods that we frequently overlook many valuable points of diagnosis that might be observed with the unaided eye. We may first observe the quantity, reaction and consistence.

Patients with bronchitis or cavities, and especially cases of bronchiectasis, have the largest quantity.

Unless contaminated with vomited matter, sputum is always alkaline.

Mucus sputum usually occurs early in acute bronchitis.

Muco-purulent sputum in chronic bronchitis and in phthisis, or in later stages of acute bronchitis and pneumonia.

Purulent sputum (nearly pure pus) indicates a cavity or an empyema.

Serous sputum is fluid, and contains albumen and is frothy. Characteristic of edema of lungs.

Blood expectorated from the lungs is usually bright red, frothy and alkaline. From the stomach it is dark, nearly brown, and acid in reaction.

Coal soot makes a black or gray sputum.

Fibers and pieces of lung tissue indicate a cavity.

Fibrinous casts indicate fibrinous inflammations. These are frequently found in croupous bronchitis.—*Kan. Med. Jour.*

ARMY AND NAVY.

CHANGE IN THE U. S. ARMY FROM OCTOBER 21, 1894, TO OCTOBER 27, 1894.

First Lieutenant Charles F. Kieffer, Assistant Surgeon, will be relieved from duty at Fort Assinniboine, Montana, upon the return to that post of First Lieutenant Edward L. Munson, Assistant Surgeon, from duty in the field, and will then report for duty at Fort Buford, North Dakota.

NEWS AND MISCELLANY.

The Horace Wells Anniversary Celebration.

All are doubtless aware of the action of the American Dental Association at its recent meeting held at Old Point Comfort, Va., with reference to holding a national celebration of the fiftieth anniversary of the discovery of the anæsthetic properties of nitrous oxide by Dr. Horace Wells.

The committee, by vote of the American Dental Association, was instructed to secure two papers to be read at the celebration; one upon the "History of Anæsthesia," by Prof. Thomas Fillebrown, of Boston, and one on the "Benefits of Anæsthesia to Mankind," by Prof. James. E. Garretson, of Philadelphia.

The committee was further instructed to arrange for a banquet to follow the meeting, at which distinguished speakers shall make appropriate addresses; a full report of the celebration, including the papers and addresses, to be printed and issued as a permanent souvenir of the occasion.

Arrangements have been completed to the extent of securing favorable responses from the essayists named, whose papers are now in course of preparation.

The banquet arrangements are also largely completed. To cover the expenses attending the celebration, the fee for admission to the banquet has been placed at $6.00. It is necessary that the committee shall have ample notice of the number who will be in attendance, in order that places may be provided for all who may desire to attend.

Subscriptions will be invited later for the souvenir volume, at a price sufficient to cover the cost of publication.

The celebration will be held in Philadelphia, in Association Hall, Fifteenth and Chestnut Streets, at 2 P.M. on Tuesday, December 11, 1894. The banquet at the Union League at 6:30 P.M.

All are cordially invited to participate in this event, which should enlist the enthusiastic support of every member of our profession.

To that end you are requested to send your check and notify the Chairman of the Anæsthesia Committee at the earliest date possible, in order that an official invitation may be sent to you.

It will be proposed at the meeting that subscriptions be invited for a permanent memorial, to take such shape as the meeting shall decide. (Signed)

LOUIS JACK,	S. H. GUILFORD,
E. T. DARBY,	WM. CARR,
C. N. PEIRCE,	A. L. NORTHROP,
D. N. MCQUILLEN,	H. B. NOBLE,
E. C. KIRK,	JAS. MCMANUS.

J. D. THOMAS, *Chairman*,
912 Walnut Street, Philadelphia.

J. H. MUSSER, M.D., has removed to 1927 Chestnut Street, from Fortieth and Locust Streets.

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ORIGINAL ARTICLES.

THE ETIOLOGY AND TREATMENT OF TUBERCULOSIS OF THE JOINTS.*

WM. M. CUNNINGHAM, A.B., M.D., Bastrop, Texas.

The etiology of tuberculosis is the same whether it invades the lungs or any other part of the body. Ubiquitous death strikes down a large number of its victims with the slow process of tubercular decay. It is considered in almost all cases hereditary. Children of tuberculous parents inherit the diathesis just as their powers of life and slow modes of nutrition are congenital. Yet I have no doubt that hereditary influences have been overrated. The disease is sometimes acquired, and it is a wonder that the cases are not more frequent and the fatality from tuberculosis is not greater, when we consider the infection of our surroundings. The sputa from consumptives, the evacuations from bowel, tubercular inflammations, the secretions from scrofulous affections of the lymphatic glands, the secretions of white-swelling, Pott's disease, caries and lupus. The products of all tubercular decay are carelessly thrown here and there, teeming with tubercle bacilli. These soon dry, are converted into dust, are wafted everywhere by the atmosphere and settle on everything "with its deadly burden."

The tubercle bacillus is a microörganism and loves to settle where nutrition is languid, to develop and propagate its species. There is no organ or part of the human body exempt from its infection, although the lungs seem to be its favorite abode, and in almost all cases where we have cause to attribute the infection to hereditary influences, the lungs and bowels are involved.

Acquired tuberculosis is apt to follow local or general malnutrition, let it be brought about by the traumatism or by an acute or wasting disease or by a long-continued suppuration of any part of the body.

The peculiar habit of the tubercle bacillus is to get into the circulation by way of the skin denuded of its epidermis, by way of the mucous membrane denuded of its epithelium, or wherever there is an asthenic solution of continuity, and, as Dr. Gerster states, "to incorporate itself with a white-blood corpuscle and to influence it in such a manner as to convert it into a lymphoid cell of somewhat large proportions. This cell becomes sessile in some parts of the body." He further says: "After a while new lymphoid cells appear in the vicinity of the first cell, which by this time will have grown to the proportions of a multinuclear giant cell, containing a number of bacilli." And after going through many changes, he states that they result in a "coagulated granular mass. The bacilli contained within them disappear, leaving behind, however, a crop of invisible spores that, transferred to a suitable soil, will readily produce a new growth of bacilli. Soon caseation is established in these coagulated

*Read before the Texas State Medical Association, April 25, 1894.

decayed cell elements. The irritant effects of this cheesy mass on the surrounding tissue stimulated Nature to enucleate it as a foreign substance with an enveloping wall of new-formed tissues.

If this process of enucleation is complete before this infected focus throws out its spores through the lymphatics or veins lying in its vicinity, this infected necrosed mass is walled out as it were from the system. It is encysted. The system is protected from its baneful effects by its encysting membrane, by its caseation and by its non-osmotic action. In this state it gives but little trouble to the system or to the parts in which it is imbedded, not more seemingly than any encysted foreign substance of its size and consistency. This is Nature's method of protection. Now, if Nature is tardy in building this encysting wall, spores of the tubercle bacilli may be carried through the circulation by way of the veins and lymphatics, and possibly by the arterial flow, to invade other parts of the system, and we have a metastasis of the infection—a general irregular distribution of cytoblastions of tubercular infiltration to serve as so many depots for the distribution of these spores in order that they may have a wider field to do their mission, which is to break down the life of tissue wherever they take up their abode. From this source we may have any and all forms of tuberculosis. There is no difference in the gray and yellow, hard and soft tubercle, other than the changes they undergo by reason of age, by evaporation and by the absorption of the coloring matter and liquids of the matter they touch or in which they become infiltrated.

Now to account for tuberculosis of the joints is easy enough. The synovial membrane may become seriously infected with tubercle by way of the circulation from a distant focus, as in cases of pulmonary phthisis. In this case the nutrition of the synovial membrane is at a low ebb. There is no resistance on the part of Nature. Caseation of the lymphoid cell, as soon as it lights upon the synovial membrane, into a harmless mass does not take place. Nature does not encyst it with a protecting wall. It has reached its proper soil. Here it begins to break down nutrition and we have a synovitis and extension of tuberculosis from the lung to the joint. Again, the tubercle bacillus may get into the circulation through some other portal, unite with a white-blood corpuscle, convert it into a lymphoid cell and become deposited in or near the joint as a primary affection. In this case nutrition may be good. The blood as it passes through the capillaries may be rich with a proper pabulum for the tissues to feed upon. There may be a great resistance on the part of Nature. This lymphoid cell of tubercular foci may undergo caseation. Nature may throw up a wall of new-formed tissue all around it to protect the parts in that vicinity from its baneful effect. Here it may remain sessile and apparently harmless. But it is only waiting for a proper opportunity. That opportunity may come with the first traumatism in the neighborhood of the joints. By a blow or sprain nutrition of the parts may be suspended, the encysting wall of this infected foci may be broken down, the sinuses and membranous sheaths of the joints begin to weep. These cheesy foci undergo emulsification, the tubercle bacilli are liberated to begin their deadly work and we have a more extensive tuberculosis of that joint.

Again, an increased exudation of blood serum and of white-blood corpuscles into this enucleated mass of necrosed tissue will dissolve and emulsify this caseous focus, and we have a cold abscess. The tubercle bacilli being liberated, turn their slow but sure forces with an untiring energy against their surrounding wall. In the course of time they break down this wall, and do a more extensive work of destruction in and around the joint. The synovial membrane pours out a greater amount of synovial fluid. The membrane itself soon becomes necrosed. The fluid thickens. Cheesy bodies float about in the fluctuating fluid. The epiphyses of the bones are perforated and they crumble. The cartilages become ulcerated, the denuded bones become necrosed and we have a severe tubercular arthritis. If this process of decay is not stopped here in this joint, the tubercle bacilli will soon increase to too great a number to inhabit this small abode and they will send an army throughout the whole system, and we will have a general tuberculosis; and in the course of time a general cessation of nutrition everywhere and the patient will be in the hands of the undertaker.

The treatment of any disease is always

simplified by a knowledge of the conditions to be met. There is no specific treatment in this disease other than its etiology should be met with a rational treatment. Since anæmia and malnutrition are the doors through which the tubercle bacilli get into the system, strive to build up nutrition by every possible means and endeavor to raise the anæmic to a higher plane of health. Then, whenever possible, lop out of the part or parts by aseptic and antiseptic surgery all traces of tubercle. There may be a dyspepsia to overcome. Anorexia, indigestion and irregularity of the skin, of the kidneys and of the bowels, are frequent concomitants and must be met with a treatment to appease and overcome. The whole system must be as near regulated as is possible. An abundant and rich supply of blood in the system is a prophylactic to the infection of tubercle, as well as it is to any other infection. Then treatment should consist in such measures as will add to the purification and rich quality and quantity of the blood, in order that nutrition of the tissues throughout the system may be promoted and protected.

For this purpose, a good, generous, rich, clean and well-prepared food from which blood can be made stands at the climax of all treatment. Fresh milk from a healthy cow and good bread are an excellent diet in tubercular affections. Cod-liver oil, which I class among the foods, is usually disgusting to the stomach, but combined with malt and other tonics, such as the iodide of iron or some good and palatable elixir, it frequently can be borne by the stomach and answer a good purpose. All tonic remedies are indicated, and we should select from them the tonics which will be best borne by our individual patient and which will be most apt to promote the appetite and digestion and to add to the quality of the blood. Good hygienic laws should be observed as the only mile-posts pointing to health.

Cleanliness of person and place of abode; a cheerful exercise of body and mind in bounds not prostrating; being clothed to best protect the system from the changes of temperature in the climate in which the patient lives; taking plenty of sunlight and fresh air during the day and sleeping in a well-ventilated room at night, are all good laws to observe and need to be pointed out and advised by the physician.

Modern surgery offers much for the alleviation and cure of tuberculosis when affecting accessible joints. The affected tissues or organs must be more or less completely removed under antiseptic precautions to meet the demands of to-day. It does not promise much for tubercular arthritis which is secondary to pulmonary consumption, or where there is a general dissemination of tubercle throughout the system. In these cases nutrition may be improved and life may be prolonged for a while, but ultimately they are all fatal.

But when tuberculous cheesy foci are located in the vicinity of a joint, good results may be expected from a thorough going operation for their complete removal.

If emulsification has taken place in the cheesy foci, aspiration and washing out the cavity with a bichloride of mercury solution (1:1,000) until the fluid returns clear, and repeating the operation as often as the cavity refills, will frequently effect a cure.

When a tuberculosis focus perforates the joint and we have a synovitis and a periarticular abscess, free incision of the abscess, washing out the cavity with the bichloride solution and instituting free drainage, a cure by ankylosis, or probably with some mobility, is possible.

But if there be suppurative infection, widespread and rapid necrosis of the epiphyses of the bones and of the sheaths, tendons and membranes of the joint, the diseased joint or limb must be sacrificed to save the threatened life of the patient. The joint may be removed provided a thorough exsection of all the diseased tissue can be done and the resultnig wound can be healed without suppuration. The infection of any part of the wound with bacteria must be prevented to accomplish a good result. Aseptic and antiseptic treatment, before and during the operation and assiduously applied during the healing process, will often succeed and deserves to be tried before a limb is sacrificed. Exsection of a joint should never be undertaken while there is high systemic fever, or while there is a great degree of heat in the parts, or while the vital powers of the patient are much prostrated.

Free incision into the joint with subsequent drainage and a tonic constitutional treatment should be instituted to pre-

pare the patient for the operation. And only after excessive heat in the diseased joint has been abated and the thermometer under the tongue indicates something near the normal standard of systemic heat should exsection be done.

The joint to be exsected should be washed clean, then with clean and disinfected hands and instruments the operation should be done, while a continuous or frequent irrigation of a germicidal solution (preferably the bichloride solution) is pouring upon the field of operation. The bones should be so divided and brought together in such a manner as will insure the greatest future usefulness of the limb. The retentives should be strong enough and so applied as to hold the parts in a fixed juxtaposition. The drainage-tubes should be disinfected and so placed in the wound as to admit of easy removal and, at the same time, carry off all waste products. The absorbent material should be boiled, then disinfected, and should be in ample quantity and quality to absorb all the secretions of the wound. The bichloride of mercury solution and iodoform or carbolic acid should be used continually; enough to render innocuous all the secretions of the wound and all the dust and filth that may fall upon the dressings from without. The wound should remain in this dressing and under this antiseptic regimen four or five weeks, when the dressings and drainage-tubes may be removed and, if need be, a new dressing applied. But if at any time the dressing should become very much soiled, it should be changed. Or if at any time the patient should have high fever and great pain in the joint, the dressing should be taken off and a search made for the cause, and if necessary a revision of the operation should be done to get rid of any remaining infection which might have been overlooked during the previous operation. If suppuration should occur and there should be much phlegmonous destruction take place in the joint after exsection, the surgeon should lose no time in amputating the limb as far above the infected joint as will be practicable, for on this will depend the slender hope of life.

Exsection is applicable principally to the shoulder, elbow, wrist, hip and knee. In all cases of serious infections of the ankle joint requiring operative procedures, amputation of the leg is probably the best and safest, for the reason that the synovial membrane of this joint is so difficult of complete removal. Rational orthopædic measures of treatment after exsection will encourage a more rapid convalescence and insure greater future usefulness for the limb.

In the treatment of spondylitis, commonly known as Pott's disease of the spine, exsection is not at our command.

Constitutional treatment with free incision and drainage in case of abscess, with antiseptics and such orthopædic appliances as will secure fixation and the greatest support to the spinal column, are perhaps the only means at hand. However, by this treatment many cases of Pott's disease recover.

The Treatment of Biliary Calculi.

M. A. Ranglaret (*Gazette des Hôpitaux*) lays down the following as the main points in the medical treatment of biliary lithiasis:

1. The first is the treatment of the calculus. For this there is no drug that appears to have much influence against the calculus; we are almost powerless.

2. The second point is the state of the hepatic secretion. There is often torpid liver, thick bile, etc. For these conditions we employ the numerous cholagogues with advantage.

3. The third indication in treatment is relief of the pain. Here we employ analgesics and antispasmodics.

4. The last point in the management of these cases is the attention needed for the inflammation and infection. For this employ the antiphlogistics and antiseptics; the local application of neat and counter-irritants are very useful. If the congestion is very intense, put eight or ten leeches on the right hypochondrium, and repeat them if required. For the condition of angiocholitis, where there is infection, fever and chills, the salicylates may be employed. Benzo-naphthol is also good. But the best remedy to combat these symptoms is calomel. It must not be given in too large doses. The author recommends four to seven grains every two or three days.

It is believed by microscopists that the highest powers of their instruments have not yet revealed the most minute forms of animal life.

BRONCHITIS IN TYPHOID FEVER—MALARIA—DIABETIC GANGRENE—TUBERCULOSIS.*

FRANCIS DELAFIELD, M.D., NEW YORK.

BRONCHITIS IN TYPHOID FEVER.

Male, aged twenty-seven years. This patient states that he was in good health until last Sunday, five days ago. On that day he began to suffer from diarrhœa and since that time this looseness of the bowels has continued. The passages at first were large, but latterly they have been smaller. Besides this he has suffered from headache and has been unable to sleep at night. He also has a cough and has raised a little blood. He has had no appetite and has vomited several times. He has felt chilly during a good deal of the time. The man's temperature to-day is 101.5°. The urine is of a specific gravity of 1010; it contains no albumin. The tongue is coated. The pulse is rapid and fairly full; there is no increased tension; it is the rapid and full pulse that goes with a rise of temperature. The heart's action is increased in frequency; there is no murmur. There is impaired pulmonary resonance both above and below the clavicle on both sides, and the breathing is louder on the left side than on the right. There are no rales.

When you look at the man you can see that he is really ill. He has not simply an ordinary cough or an ordinary diarrhœa. The history he gives us is that of beginning typhoid fever, and there are one or two points in connection with it which are worth noticing. Very often at the beginning of typhoid fever there is more or less bronchitis. That is what this man has had and it is apt to lead us astray from the real diagnosis. Still further, in this man there is a change in the resonance over the front of the chest, more marked on the right side than on the left, and there is a difference in the breathing. This may very well mean that there has been an old tubercular change in the upper part of the right lung, with some retraction, but that has no direct bearing on his present condition. During the first few days of typhoid fever the symptoms are very often of such a character that they make you think of other things. I saw yesterday in consultation a patient in the fourteenth day of typhoid fever, and the diagnosis had not been made simply because he had a bronchitis, just as this man had. The symptoms in this case at present are not severe; and, as a matter of fact, the cases of typhoid fever we are seeing this fall in New York are running a pretty mild course. I do not think there are any special indications for treatment in this case. The man should go to bed at once and stay there, because we know very well that the longer a typhoid patient keeps up during the first week of the disease the sicker will he become afterward. It is very well to try to fight off some milder ailments, but with typhoid fever the sooner the patient gives up and goes to bed the better are his chances of early recovery. He should be put on a fluid diet, and for the insomnia I know of nothing better than sulphonal, in twenty-grain doses.

*A lecture delivered at the Vanderbilt Clinic, New York, October 11, 1894.

MALARIA.

Male, aged twenty-nine years; a tailor by occupation. Has been living in New Jersey for the past two years; came to this city on the 3d inst. For three months past he has had chills, fever and sweating, with headache every other day. Since the 6th inst., however, these paroxysms have occurred daily, and instead of coming on at ten o'clock in the morning, as they formerly did, they now come on at eight o'clock. He has no appetite. His pulse is weak and rapid. His bowels are constipated. His temperature now is 102.5°. His urine contains no albumin. His chill this morning lasted four hours. The tongue is slightly coated and moist. The spleen is considerably increased in size and tender.

The history of this patient is a clear one of malarial poisoning. The man states that he has been taking fifteen grains of quinine daily, but instead of growing better, he is growing worse. His paroxysms are coming on every day instead of every other day, and the chills

occur earlier in the day. This is really a much more severe case of intermittent fever than we are apt to meet with in New York City or in its immediate vicinity. Still, there are parts of New Jersey where the malarial fever assumes a pretty bad type, and I have even seen malignant cases there. When we come to the treatment of such a case as this, the first thing I would recommend is that the patient should go to bed. Then as to the feeding. These patients do not have any appetite, and yet, when they are free from the fever, they are capable of digesting food, and you must not allow them to run down too much on a fluid diet; fluid food will answer in some cases, but still patients will not flourish under it, and in these cases you should try to get in a little solid food when you can. Scraped beef is the form of solid food that is most easily digested. You do not want to manage a case like this as you would one of typhoid fever. Another point is that the remedies for the malarial poisoning are more likely to have effect when the bowels are kept open. This should be done not by enemas or suppositories, but by a laxative, and generally speaking one of the salines is best: sulphate of magnesia or Carlsbad salts or the ordinary Seidlitz powders, given about every other day. As regards drugs, I think we can rely upon quinine, even if the patient tells you, as this one does, that he has already taken it and that it has not benefited him. There is a difference in the quality of quinine, and there are different methods of giving it. In a case like this it is best given in solution. You want to get the effect of the drug. The best way is to make up a solution so that each dram of water will contain five grains of sulphate of quinine and five grains of dilute sulphuric acid. I do not think it is worth while to try to disguise the taste of the drug with syrups; it is impossible to disguise it. You commence giving the drug in the afternoon, after his paroxysm has passed off, and give five grains every hour until he has taken thirty grains. This should be repeated the next day, and if after two or three days it becomes evident that he is not improving, I should begin to increase the quinine, if necessary giving him one hundred grains within twenty-four hours, unless poisonous symptoms appear. It is not safe to allow a case of malaria like this to go on without vigorous treatment, as it may readily assume the pernicious form and prove fatal.

DIABETIC GANGRENE.

Female, aged fifty-five. Three years ago began to fail in flesh and strength and to pass her water more frequently, especially at night. These symptoms gradually became worse. Five weeks ago one of her toes became swollen, red and painful. Two weeks later she came here for surgical treatment, and it was found that the affected toe was in a gangrenous condition. Examination of her urine revealed the presence of sugar and she was sent here for medical treatment. During the past week she has been on a diabetic diet, and has received in addition one-quarter grain of codeine, three times daily, with iron and strychnia. To-day her urine is of a specific gravity of 1040, and you can see that there is a large reduction of copper at the bottom of the test-tube, which means that the urine contains a considerable proportion of sugar to the ounce. She has lost flesh and strength. The urine is not very much increased in quantity. As the foot has just been dressed by the surgeon, I will not remove the bandages. The end of the toe is black and shriveled, and just above this there is a line of granulation tissue which is suppurating slightly, and which marks the line of demarcation between the dead and the living tissues. The gangrenous process in these cases usually begins in one toe and then extends to another, or it may extend upward. These patients with diabetes and gangrene are always elderly people. A young person with diabetes does not have gangrene. In some of these patients you first get the history of the diabetes; in others, of the gangrene. Some will tell you that they have been passing too much water, that they have been unnaturally thirsty and that they lost flesh and strength before the appearance of the gangrene; others will tell you that they have been in their natural health, and the first thing they noticed was the onset of the gangrene. In all these cases, however, when you come to examine the urine, you will find that it contains sugar. Still further, you will find that the arteries are tortuous with thickened walls. On account of this chronic endarteritis the arterial supply of

blood is cut off and gangrene is the result. It is not the result of the sugar in the urine, but of the interference with the arterial circulation, and yet there is this curious thing about it, that the sugar is always present. We do not know why this combination should exist. As regards the treatment of these cases, it is equally unsatisfactory for the gangrene and for the diabetes. You can readily see why the gangrene is not likely to do well; the arteries are obstructed and you cannot bring back the blood-supply. The affected tissues are allowed to slough away or they may be removed by the surgeon. I find that some surgeons remove the gangrenous tissues, while others allow them to slough off, and it does not seem to make any difference which plan they pursue. The medical treatment is just as unsatisfactory, because we cannot control the diabetes. These patients continue having sugar in the urine, and I do not think it is wise to try and treat them very vigorously. They should be put on the diabetic diet, but not too strictly; do not starve them. We know that we cannot cure them; they will not live a great while and there is no use in being too strict. The medical treatment amounts to nothing. Codeine is usually advised, and we might as well give that as anything. All we can do is to make these patients as comfortable as possible.

TUBERCULOSIS.

Female, aged sixteen years. This patient, according to her mother, has never been very robust. Last April she had an attack of scarlet fever from which she recovered, but from that time to the present she has been failing. She is losing flesh and strength and is growing paler. She has a cough in the morning without expectoration. She has had no hæmoptyses. Her appetite is fair. Her temperature to-day is 99.8° in the mouth. There is some shortness of breath. On the left side of the chest the resonance, while not a full one, is not much impaired. On the right side, both above and below the clavicle, the sound is shorter, the pitch higher and the quality is different from that on the left side. The quality of the breathing is also changed: the breathing is that of a lung which is partly consolidated. There are no râles on either side. The case seems to be a straightforward one of tubercular inflammation of the upper part of the right lung, which commenced about the time when the girl was recovering from scarlet fever. The girl is very much emaciated, her color is bad, and it must be confessed that the case is not a very promising one. She does not look like a good subject for a tubercular inflammation. She is getting worse rather than better. If her circumstances would allow it, a change of climate might perhaps benefit her, and in her case I would select a warm inland climate. Her circumstances are such, however, that she must stay at home, and the best thing we can do is to try and nourish her as well as possible. I would not advise giving her creasote, or any drugs directed immediately to the lesion in the lung. We can learn from the girl's mother what sort of food she is able to buy, and then make out a diet list, and add to that fat in some form, either cod-liver oil or cream or milk.

How to Arrest a Boil, Carbuncle or Malignant Pustule.

Dr. Barker writes to the *Medical Summary* that he has used the following procedure for several years, with unvarying success. Take a large hypodermic syringe, holding, say, half an ounce, fitted with a small needle. Fill it with a 1 to 500 solutionof mercuric chloride, insert the needle into one of the peripheral openings, in case it is a carbuncle, and wash out the little cavity. Then direct the needle toward and into the surrounding induration and force a little of the solution into it. Treat each opening and its corresponding peripheral circumference in the same manner, carefully washing out the necrosed connective and other tissues that have become separated. Repeat this daily with the solution, gradually reduced to one-half the original strength, until all induration has disappeared and granulations have begun to appear. If the first injection be thoroughly performed, the spread of the carbuncle will be arrested at once, and there will be no more pain. Washing out the little cavities is painless, but the injection into the indurated tissues is not free from pain. The same treatment is applicable to the little furuncles that invade the meatus auditorius externus and the inner surface of the alæ nasi.

INFLAMMATION OF EXTERNAL AUDITORY CANAL FOLLOWING FACIAL ERYSIPELAS.

P. R. CORTELYOU, MARIETTA, GA.

Mrs. C., widow, aged 68, consulted me January 1, 1894, giving the following history: In August, 1893, she was attacked with facial erysipelas on the right side, commencing on under lip and extending entirely over the right side of face, but leaving the left side unaffected. The usual treatment of tincture of chloride of iron internally and tincture iodine and nitrate of silver externally was used by her family physician. The inflammation involved the right ear, which became swollen and, after a week or ten days, began to discharge very offensive matter. This condition was treated with warm carbolized injections and laudanum and olive oil dropped into canal. The inflammation subsided and the discharge from the ear ceased from the latter part of October until the latter part of December. During this time the patient complained of deep-seated pain in the right ear, and intense burning of the side of the face, lower lip and tip of the tongue on same side, the feeling being, as the patient expressed it, as though the parts had been touched with a coal of fire. The face on that side would also become very much flushed. Her physician told her that these symptoms were not caused by the condition of the ear, but were due to the state of her nervous system. Various measures were tried to relieve this intense burning, but all without success, the patient suffering very much from its daily and almost constant occurrence. The discharge from the ear coming on again the latter part of December, 1893, she then consulted me.

On examination I found the lobe of the right ear somewhat swollen and tender, also swelling and tenderness of the tragus and face near it. A thick, heavy discharge from the aural canal, very tenacious, with severe burning pain of the side of the face, lower lip and tip of the tongue on the right side. Hearing distance of watch, "contact." The throat also showed some pharyngitis and post-nasal irritation, and the anterior nasal canal on the right side was congested and irritable. The patient said that often it became completely stopped up, especially at night.

The ear was syringed with warm water, after which a 12-volume solution of peroxide of hydrogen was dropped into the canal, which caused, as the patient expressed it, much frying. The canal was then dried with absorbent cotton. Upon examination with an aural speculum, it was found to be denuded of epithelium in places, especially near the drum membrane. The inflammation showed a condition of acute eczema of the canal. The canal was filled with powdered boric acid. The throat and nasal passages were then sprayed with an alkaline solution and the fluid extract of hydrastis (colorless) applied on cotton. The ear was inflated by Politzer's method and the nasal passages then sprayed with albolene, with 10 drops of eucalyptol to the ounce. Also I ordered Fellows' syrup of hypophosphites combined with Fowler's solution of arsenic three times a day.

The local treatment of the ear and nasal passages was made every other day, and on this line of treatment there was much improvement; the burning of the face, tongue and lip was much less. Hearing distance for the watch increased to four inches. The aural canal not assuming healthy action, I applied nitrate of silver, 20 grains to the ounce, two or three times a week.

The latter part of February, from exposure and cold, the inflammation returned in an acute form, the lobe of the ear becoming much swollen and very tender; also the tragus and the parotid gland became very tender and congested; the pain and burning in the face, lip and tongue were very severe. I ordered syringing with hot water, also slippery elm poultices alternated with a hot salt bag applied to the ear. A four per cent. solution of cocaine was dropped into the canal as needed to relieve the pain, and anodynes were given at night to promote sleep. After a few days there was a free discharge from the inner part of the tragus and also from several points of the canal, with re-

lief of pain and swelling. Again I used the solution of peroxide of hydrogen and, as a dressing, powdered boric acid, alternated with powdered aristol. I gave as a tonic an elixir of three chlorides in place of Fellows' syrup of hypophosphites.

March 19th. The patient began to improve, but the canal still showed a tendency to keep raw and irritable, and was in a condition of chronic eczema. I ordered sulphate of zinc, 15 grains; alcohol, ʒij; aquæ, ℥ij, to be warmed and dropped into the ear several times a day. This change of treatment acted nicely; the swelling disappeared and the canal became more open; the pain and burning were considerably relieved, but did not disappear.

The case is still under treatment, but now with good prospects for recovery. This case to me has been an interesting one, on account of the special symptoms of burning on the side of the face, lip and tongue, and its being confined to the right side, showing some implication of nerves on that side.

COMMUNICATIONS.

DESTRUCTIVE LESIONS IN ACUTE TUBAL INFLAMMATION.*

GEORGE ERETY SHOEMAKER, M.D., PHILADELPHIA, PA.

So much attention has been given to the clinical history and treatment of tubal and ovarian inflammatian that the matter might seem to have been exhausted. Yet cases are not uncommonly appearing where the extensive character of the destructive processes going on has evidently not been realized. It is not every case which tends to recovery on expectant treatment, and it is worth while again and again to call attention to what may occur, if only to induce more men to use eye and hand in diagnosis, instead of relying altogether on clinical history.

So much attention has recently been given to the subject of appendicitis that the rapidity with which its tissue may break down and the surrounding peritoneum be infected is becoming widely understood, and a prompt appeal is now commonly made to physical examination; and in the event of doubt, to the highest court available.

The present object is to present again the fact that inflammation of the tube also may be rapidly destructive, with the formation of pus in quantity great enough to endanger life through softening and rupture of its limiting wall, whether that pus be highly infective or not.

The analogy between the appendix and the tube is not without interest. Both are free in the peritoneal cavity, supported along the edge of a membranous fold; both have muscular, mucous and peritoneal coats.

They are not unlike in size, though varying greatly; while as to situation, the right tube lies very near and often in contact with the appendix, being frequently involved in the same inflammatory process. They are exposed from within to diverse forms of infective bacteria, but either may be infected from the other by continuity after adhesions have formed.

Catarrhal inflammations which do not go on to pus formation or degeneration of tissue occur in both structures, but more frequently in the tube, owing to its greater vicissitudes from situation and function.

The very rapidly progressive inflammations, however, going on to gangrene, rupture and death from peritonitis within three or four days, are relatively common in the appendix and rare in the tube, the destructive process usually taking much longer in the latter case, though everything depends on the character of the infection. A rapidly fatal case with gangrene of the tubal mucous membrane is mentioned by J. Bland Sutton.*

One cause of this difference is mechanical. In the case of the appendix, a hard body, usually fecal, just fills the lumen

* Read before the Philadelphia County Medical Society, October 10, 1894.

* "Diseases of the Ovaries and Fallopian Tubes," p. 236.

before the attack begins. The swelling of the mucous membrane makes the lumen too small for the body inside; pressure results which, aided by the ever-present bacterium, in a few hours causes strangulation and local death. In the tube, on the other hand, there is no foreign body and no local pressure, rupture occurring later at a point gradually thinned by diffused pressure and local degeneration.

Another reason for the relatively greater protection of the general cavity of the peritoneum in the case of the tube is anatomical.

Between its peritoneal covering and the muscular coat is a quantity of loose connective tissue, which, becoming thickened and distended by inflammatory cell infiltration, greatly strengthens the natural barrier against infection from within in the early stages of the disease, and gives time for the formation of adhesions without. In a tube from one of the cases reported this can be well seen. The wall near the uterine end has been cut partly through, and the outer or connective-tissue envelope, about an eighth of an inch in thickness, is peeled back, showing the central rod-like portion undistended and still intact. That portion of the tube is not irretrievably injured in all probability. In some acute cases the same process is seen in the broad ligament which, after all adherent structures are removed, remains half an inch or more in thickness instead of only a line or two. The cellular tissue between the folds of peritoneum has been infiltrated. It has occurred to the writer to observe this condition best marked in subacute cases which have followed puerperal infection. There is a sense then in which what was once called "cellulitis" really occurs, though the ideas of pelvic pathology formerly held have been so largely proved to be erroneous.

Where salpingitis goes on to pus formation, the sequence of events is frequently as follows: The abdominal end of the tube is closed and its cavity distended by retention of the secretion of its walls and by pus formation. The layers of the mesosalpinx are separated until tube and ovary are in contact and adhesion occurs, or else tube and ovary adhere directly without splitting the mesosalpinx. The tube wall thins and the ovary becomes involved secondarily * through a distended ovarian follicle, when tuboövarian abscess results. The ovary now enlarges until its pus contents frequently exceed those of the tube and measure several ounces.

The after-history of these cases, if they escape an early death, is usually made up of progressive invalidism varied by intervals of relief, if by chance the pus empties intermittently into bowel or bladder.

When the abdominal end of the tube does not close quickly enough, peritonitis, which may or may not be limited, is set up by direct escape of fluid from the end of the tube, as in Case II.

Case I.—Tuboövarian abscess; operation; recovery. This illustrates the rapidity with which total destruction of the adnexa may occur, as the gross changes observed had all developed within a known period of eighteen days, or perhaps earlier. I made careful bimanual examination just at the beginning of the attack, and found the pelvic organs practically normal in size, while at the operation each ovarian abscess alone was three inches or more in diameter. The woman was twenty-three years old, married seven years, childless; her second miscarriage, four years before, having been followed by sepsis, which had left her with various pelvic symptoms, but no gross lesions. She was well-nourished, and able to work until an acute attack of pelvic distress brought her to the Methodist Hospital, where she at first entered the surgical service of Dr. H. R. Wharton. When seen by the writer in consultation she presented a flat abdomen, tenderness in a prolapsed left ovary and in the bladder wall, but both tubes and ovaries were normal in size, as was the uterus, which was noted as forward and movable. The general condition was good, and many details of examination, purposely omitted here, were negative. In other words, though she was afterward proved to be on the eve of a violent attack of pelvic inflammation, it had as yet scarcely begun. General treatment was advised, with laxatives and hot douches. She grew rapidly worse, however, in the next ten days, the temperature reaching 104.2°, and exquisite tenderness and tympany supervening.

When examined by Dr. Kynett, under whose care staff changes had now brought her, the uterus had become fixed, and a tender mass had appeared on the right. Eight days later she had been transferred

*Bland Sutton.

to the hands of the writer, and the abdomen was opened. With care and gentleness an attempt was made to separate the adherent coils of intestine from a large mass at the right, but several ounces of thick yellow pus immediately welled from the wound. The sac was evidently on the point of rupture on its upper convexity, where a blackened, sloughing area, an inch in diameter, was about to give way at its center. With some difficulty a tuboovarian abscess was excavated from each side of the pelvis. The lumen of either tube was of the diameter of the thumb, the length increased to about six inches, while the two principal pus sacs, one apparently in each ovary, were three or more inches in diameter. The sac on the left was in the recto-uterine cul-de-sac, and contained highly offensive dark red pus. Being tightly wedged in the depths of the pelvis, held below by firm adhesions, and having a wall much softened and degenerated, this sac also was ruptured in removal. Both tubal and ovarian sacs were completely removed. Because of the black and degenerated appearance of the adhesions which occupied Douglas' pouch, and of the thorough infection of the pelvis by pus distribution during the operation, after flushing and a careful toilet, a gauze handkerchief stuffed with strips of iodoform gauze was packed into this space, and brought out at the lower end of the wound below the glass tube. This gauze was removed on the second day, and stitches, previously put in, tied down as far as the glass tube, after the cavity occupied by the gauze had been cleaned with hydrogen peroxide. For the first two days only there was some vomiting, and liquid food in small quantities was given by the bowel.

Glass tube out on the seventh day. The convalescence, somewhat slower than usual, was complicated by slight superficial suppuration about the drainage-tube end of the wound, so that the patient was not allowed to sit up until the twenty-eighth day instead of on the twenty-first, as is my routine practice. She was discharged well five and a half weeks after the operation. She reports herself well five months later, though with some pain at times.

This specimen, though shrunken by several months' immersion in alcohol, serves to show the condition of the tube and its free communication with the ovarian sac. The point of softening and imminent rupture is seen as a small opening. It would be difficult for me to believe that these extreme changes had occurred so rapidly had I not had an opportunity of mapping out the parts beforehand.

Case II.—Post-puerperal inflammation of both tubes and ovaries, with left pyosalpinx and hematoma of right ovary; operation; recovery and cure. This case illustrates a less advanced condition than the other, pus formation having occurred in one tube only, while different portions of the specimens serve to illustrate steps in the process of destruction.

S. B., aged thirty years; married nine years, three children, three miscarriages. Menses normal until two periods missed four months before. Probable miscarriage two months before applying, with recurrent hemorrhage and several attacks of sharp abdominal pain since, though working as usual. Five days before there was a sharp attack of pelvic pain with fever, which confined patient to bed two days. Examination on admission to the Methodist Hospital showed a subinvoluted uterus, with cervix soft and patulous, with tense fixed tuboövarian masses on each side. There was endometritis, but no physical signs of extra-uterine pregnancy were present, though the history suggested it in many ways.

Cœliotomy was done next day, after first curetting a quantity of soft tissue resembling placental débris from the uterine cavity, which was irrigated thoroughly and packed with iodoform gauze for drainage.

Abdominal incision showed the small intestine and sigmoid flexure moderately adherent to the tuboövarian mass. On the left a small pocket of grayish-red pus, not offensive and not over two drachms in quantity, was disclosed outside the tube and walled in by adherent intestine. This was in all probability the result of leakage of the tube before its outer end was sealed. The ovary was normal in size, inseparably united to the tube, which was hard and contorted, its color very dark red, but nowhere black. The mesosalpinx was not split. The tube was thickened by cell infiltration at the uterine end, gradually enlarging from a diameter of one-half an inch to one inch at the ampulla, which contained reddish-gray pus. Both tubes

were sealed and their fimbriæ lost in adhesions. Both broad ligaments were infiltrated to a thickness of half an inch. The right tube was shorter and smaller than the left, but though firmly buried in strong adhesions it contained no pus. It was very hard. The right ovary contained a hematoma about two inches in diameter, the blood being black and semifluid. Total removal of tubes and ovaries; flushing; glass drainage; good recovery. The woman was seen well and working five months later, complaining only of the flushing due to artificial menopause.

The specimen here shown exhibits in its different parts stages in the progress of salpingitis. Near the uterine end of one tube which has been split may be seen the greatly swollen longitudinal folds of mucous membrane not yet adherent together. Mucous surfaces do not adhere, when inflamed, as early as do serous surfaces. These folds, when swollen, very tightly fill the tube, so that it feels hard, and when it is cut longitudinal they appear to have been inclosed in a space too small for them, so that the incision will not close again. Farther out in the dilated ampulla pus was found, and the structures are extensively altered in appearance. The fimbriated end had been sealed by covering in the fimbriæ and packing them together inside the tube, the serous covering swelling and uniting outside them. Though they are somewhat adherent together they still can be distinguished. Later on in the disease they would become disorganized or lost in the wall of what had become simply a pus sac with smooth rounded end.

EXHIBITION OF CASES ILLUSTRATING THE OPERATIVE TREATMENT OF ILIAC (SPINAL) ABSCESSES.*

JAMES K. YOUNG, M.D., PHILADELPHIA.

These cases illustrate the operative treatment of iliac abscesses of spinal origin.

CASE I.—Martin W., white, male, aged four years.

Family history: Negative.

Past history: Natural birth. At ten months, croup. At four years, brought to University Hospital Dispensary, having suffered for six weeks with pain in left thigh. During this period he has had a limp, and has been supposed to have had rheumatism. He has had night cries.

Mensuration showed:

Length—R. L. 18″ Circ. @ 3″ = 9½ @ 5″ —10¾. R. calf = 7⅜″.

Length—L. L. 17¾″ @ 3″ = 9½ @ 5 — 10¾. L. calf = 7⅜″.

Diagnosis at this time was doubtful, the psoas irritation resembling incipient coxalgia. Later, lumbar Potts was indicated by the characteristic posterior deformity.

At five years of age, in January, 1894, had chicken-pox and "grippe." At this period the kyphosis was slowly enlarging. The child had been wearing a Taylor spinal brace for four months. The brace being out of order, the child was put to bed at the end of January, 1894. The day after removal of the brace a tumor appeared in the left groin.

February 5, 1894. Admitted University Hospital. Examination shows the tumor in the left groin to be above Poupart's ligament just internal to the anterior superior spinous process of the ilium. It is a fluctuating swelling, easily distinguishable from a hernia, to which it has a superficial resemblance. The patient's back shows a slight kyphosis involving the second and third lumbar spines.

Diagnosis: Pott's disease with slight kyphosis, and coexistent with ilio-lumbar abscesses. Operation by Dr. De Forest Willard on day of admission. Ether anæsthesia. Abscess cautiously opened; much pus evacuated. Counter-opening made in back, and rubber drainage passed through.

9th. Discharging freely.

10th. Temperature 102⅘°. Enema followed by drop in temperature.

22d. Temperature still hectic. Sinus washed out with peroxide of hydrogen and sublimate solution.

24th. Onset of measles. Isolation.

March 16th. Out of quarantine.

29th. Plaster jacket. Discharge has lessened.

*Read before the Philadelphia County Medical Society, October 10, 1894.

April 20th. Back and groin healed; is up in chair.

May 16th. Cast removed; brace applied; child walks.

23d. Discharged, well.

CASE II.—Raymond C., aged four years; American.

Family history: Maternal grandfather died of phthisis.

Past history: First symptom noted by mother in April, 1893; child waking screaming and rigid at night. Three weeks later a severe chill, accompanied by muscular spasm.

Previous treatment, the application of a liniment advised by a physician.

Examination shows marked lordosis.

Treatment: The application of a Taylor brace, and syr. hypophosph. simp. drachm j., t. i. d.

Diagnosis: Lumbar Pott's disease.

Present history: Admitted to University Hospital, July 15, 1894. Patient complains of pain in sitting posture. The spine is still arched. There is distinct fluctuation in left iliac region, which is slightly prominent and may be said to be pointing just above Poupart's ligament. This abscess is probably of vertebral origin.

Operation: Operation by Dr. James K. Young, July 20, 1894. Incision in line with Poupart's ligament, along its outer third. Pus evacuated. Counter-opening a little above sacro-iliac junction. Antiseptic precautions; iodoform dressings.

For these notes I am indebted to Dr. Jos. M. Spellissy, assistant surgeon in the Orthopedic Dispensary.

I had intended reporting a similar case which occurred in private practice, in which Dr. Willard, Dr. Ashhurst, and myself were associated. In this case it was considered advisable to either trephine the upper part of the crest of the ilium or remove a portion with a rongeur forceps, so as to permit the drainage-tube to lay flat in the iliac fossa. The latter was done, and appeared to facilitate the drainage and healing of the abscesses rather than retard them.

The frequency of these abscesses is well shown in Michel's statistics, in which out of forty-eight abscesses of spinal origin, thirty-nine, or 70 per cent., were in the pelvis.

In regard to the treatment, the opinions of authorities range from extreme expectancy to early and radical operation.

Two plans of treatment are offered: that of expectancy and that of incision and drainage. Cases are recorded in which, under expectancy, recovery has ensued; notably one each of Drs. Taylor, Bradford and Lovett, and I have one now under observation in which absorption appears to have occurred.

There are two other methods to which attention must be called:

1. Repeated aspiration.

2. Injection of fluids to promote absorption.

The former is unsatisfactory on account of non-withdrawal of caseous clots, and the latter dangerous, and in some cases fatal, from absorption of carbolic acid. The objections to the early radical operations, especially erosion of vertebræ, is the high mortality, and Dr. Rupprecht, of Dresden, informed me six years ago that after a fair trial he had abandoned the radical operations, because 50 per cent. died from the operation. The operation here advocated is performed under strict antiseptic precautions. The abscess is opened by careful dissection, it is thoroughly irrigated with boiled water and boric acid solution, a long, grooved director is passed up to a point above the sacro-iliac juncture, and a straight longitudinal incision is made upon it. A rubber tube is passed through and secured with safety pins.

Emulsion of iodoform (10 per cent.) ℥ss is thrown in, iodoform gauze packed about the wound, and a bichloride dressing applied.

Indications: The indications for the operation are: (1) where the abscess is large and making pressure upon important organs; (2) where the abscess is increasing rapidly in size; (3) where there is danger of rupture of the abscess into the peritoneal cavity.

VOLUNTARY muscles are almost always red; involuntary muscles are generally white, the most notable exception in the latter case being the heart.

THE blood flows almost as freely through the bones as through the flesh of very young children, but as age comes on the blood-vessels in the bones are almost filled with matter.

ILIAC ABSCESSES, NON-SPINAL IN ORIGIN.*

DEFOREST WILLARD, M.D., PHILADELPHIA.

Iliac abscesses arising from causes other than spinal caries are not infrequent. Accumulations of pus in this region should receive careful attention, as the prognosis will be greatly influenced by the source of trouble. I have seen a considerable number of these pus accumulations either from direct or indirect violence. In several instances the individual has been conscious of a sudden pain or "giving way" within the pelvis during violent exertion or sudden wrench of the body, or from other peculiar movements. This is usually followed by pain or discomfort. In two or three of my cases the pain has lasted for months, and in one instance for a year, before any positive results were discoverable. In the majority of cases a rupture of some fibers of the iliacus probably takes place, suppuration follows, and the pus slowly makes its way downward toward Poupart's ligament.

There is usually slight flexion of the leg, or at least an inclination to relieve the pain by relaxation of the tense sheath.

At the present day it is well to remember that an individual may have pain and inflammation even in the right iliac region without having appendicitis, and that a woman may have a pelvic abscess which is not due to tubal disease.

One case I recall where a man had suffered for months and had become greatly emaciated and exhausted, presenting the appearance of tubercular disease, yet was speedily and thoroughly cured by through-and-through drainage of a pus cavity in this region.

In another case the condition found was apparently due to degeneration of the tisues from an attack of the grip. The patient was not conscious of any injury having been received in this region, yet there was a possible history of rupture of some of the fibers of the iliacus several months previous to an attack of influenza. When seen he had high temperature, chills, perspiration, etc., and had been in bed many weeks, suffering intensely with pain down the leg and in the hip. The hip was partially flexed and adducted, but there was no thickening about the trochanter or hip-joint. The left iliac fossa was firm and dense, and a large tumor presented under Poupart's ligament extending down the vessels.

Two quarts of pus were evacuated through an incision just below the anterior spinous process, and a tube was carried back to a counter opening made above the crest of the ilium. No bare bone was discoverable, and all the symptoms of hip disease were speedily relieved. There was absence of evidence of spinal caries.

In another case the mass was at first believed to have originated from an appendicitis, but this supposition was afterward proven to be unfounded.

In another instance there was deep-seated pain, emaciation, and so forth, indicating malignant disease. An incision was decided upon with the result of obtaining a large amount of pus; successful recovery ensued. In this case there was absence of all evidence of bone disease, and the result justified the diagnosis.

The conditions with which these abscesses are most liable to be confounded are abscess from spinal caries, from hip disease, and from innominate disease. I have seen a number of cases of the latter complaint, where the caries has been situated upon the inner side of the innominate bone, and in one instance the ostitis was at the internal face of the sacro iliac junction.

It is frequently difficult to decide in a case of bared iliac bone whether the bone lesion was primary or whether it is a secondary result from maceration in the pus.

A careful history of each case is requisite in arriving at a conclusion, and in some instances a diagnosis is only possible after an incision. In spinal caries there will necessarily be rigidity of the back, but not necessarily pain nor even deformity. If there is vertebral ostitis there will usually be a history of "stiff back." Of course, if kyphosis is present, the diagnosis is easy.

A diagnosis from abscess from hip disease which has perforated the acetabulum is not always easy. There may be flexion of the hip; there may be adduction or ab-

*Read before the Philadelphia County Medical Society, October 10, 1894.

duction, and there will necessarily be rigidity with fixation, especially if tension be put on the iliac muscle. To make a correct diagnosis requires close attention to the whole group of symptoms. If a surgeon considers a single symptom rather than the group he will find it easy to confound these abscesses with any one of the conditions already mentioned.

I have seen a number of cases of sarcoma in this region (*Med. and Surg. Rep.*, 1894), and in the early stage I do not believe that it is possible for any one to arrive at a positive diagnosis. The history may throw some light upon the subject; but as many sarcomas are lighted into discoverable existence by injury, even this is of but little service.

THE DOCTOR'S WIFE—AN IMPORTANT FACTOR IN HIS SUCCESS OR FAILURE.

Much has been said of the trials of the doctor's wife. Complaint is often made because the doctor leaves his wife so much alone; because he does not go with her to parties, to the theater, or pleasure-driving; does not spend many evenings reading to her from some entertaining book; is not always bubbling over with animal spirits after the performance of his daily tasks, etc.

We have observed that he who has such a wife, or one not content to share the life of the busy doctor, is doomed to failure more or less complete. On the other hand, when the doctor's wife takes a pride in her husband's work, enters into his life, is proud of his success and sympathetic with his failures, then the doctor succeeds.

Dr. E. C. Valentine (*Medical Record*) tells the following illustrative of many points in the success of the doctor and his wife. He says: "Once I had occasion to call on a successful practitioner, whose home life, because of its happiness, was the subject of much comment. The doctor was not at home. His wife urged me to wait for the doctor, as she had sent for him a moment before. I explained that I was not a patient but a colleague. 'I am so glad, doctor,' she responded; 'won't you come in quickly, please? I have a man on the operating-table with, I think, his posterior tibial artery cut. I controlled the hemorrhage with an improvised tourniquet, but of course would not attempt to ligate.' I then observed that Mrs. Doctor had stained her elegant dress with blood. Her hat and gloves were lying on the floor of the operating-room. The patient was lying with his injured leg raised on an inverted chair, the trousers and drawers slit, and a tourniquet neatly applied to control the bleeding. Just then the husband came in. She assisted him at the ligation; pride in her husbandand in herself gleamed in her eyes, and when all was done she patted him affectionately on the cheek and said, 'Good-by, darling.' 'But, dearest,' he said, 'you have lost the matinée in consequence, and your new dress is ruined.' 'What is a matinée or a new dress to seeing a good operation performed by a good surgeon, and that surgeon my husband?'"

Dr. Valentine remarks: "This woman was proud to possess her husband; she sought happiness in being his wife, and did not complain because the world called her the wife of Dr. ——. Is it a wonder that such a man succeeds? He leaves home with encouragement from her; he hurries home when tired, exhausted, in doubt, to get more encouragement and stimulus for study and work from her; she is all and everything to him; both are happy, and she consequently does not fly into print to proclaim what a miserable creature she is."

With shadings to suit each individual case, this story is typical of the true wife —the true doctor's wife. Such a wife is a priceless life-partner to the doctor.—*American Lancet.*

Acne.

To cure acne, give one-fiftieth grain of sulphide arsenic, three times a day, and apply first sulphuric ether to the pimples and face, wash well with fine soap and apply topically a saturated solution of boracic acid in alcohol. The cure is expedited by wearing at night a mask made of thin rubber, such as dentists use, and is called rubber dam.

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SATURDAY, NOVEMBER 10, 1894.

EDITORIAL.

THE METRIC SYSTEM.

For a year or more this much-mooted subject has enjoyed a rest, which we propose to disturb by again bringing it to the attention of our readers. At one time and another, probably all the arguments for and against the change to metric units have been presented. Yet the whole literature of the subject may be condensed into the statement that one set of physicians believe that the conceded difficulties of making the change will be more than compensated for by the advantages of the decimal system, while another set, though granting these theoretical advantages, believe that the trouble of learning and the danger of using unfamiliar concepts of quantity are too great to warrant the reform. Such an argument has doubtless been held over every radical change in human customs. The argument may be shortened under a paternal government and lengthened in a country where an atmosphere of liberty strengthens personal opinions and prejudices, but in the long run genuine superiority will be recognized, while the specious success of false reforms will prove temporary. It is not difficult to prophesy the outcome of the present controversy. With the exception of the British empire, which is always conservative, and of the United States, which is usually radical but always independent, the metric system is in practical every-day use in the entire civilized world, while in nearly all branches of science it is almost universally employed. The first timid footsteps into an unknown region may be retraced; not so the onward march of multitudes.

The latest decisive battle for the supremacy of the metric system in the medical domain was that fought for the possession of the United States Pharmacopœia. In 1880 a foothold was obtained, but it was precarious. In 1890 it was questionable whether this would be permanently lost or whether a decisive victory would be gained. The superiority of a scale of denominate units in accord with the universally employed decimal notation of abstract numbers once more prevailed. But though the victory was won, the majority

of the defeated are still to be "reconstructed." It would be not only discourteous, but unwise and dangerous, to insist on the abandonment of measures familiarized by long use. The middle-aged and elderly members of the profession will, for the most part, adhere to the apothecary's system. The change, however advantageous theoretically, can offer to them no adequate compensation for the trouble involved. It is the comparatively young men who will receive the benefit, those who still build up their prescriptions, ingredient by ingredient, by the tedious process of multiplication of the single dose, not those who have in mind in an instant the completed prescription.

There are certain obvious duties in the matter to which we wish to call attention. The pharmacist, whether he has a store in the heart of a populous city or whether he is located at some country corners, is just as much under obligations to be able to compound a metric prescription as he is to keep in stock an officinal drug. He has no more excuse for being without metric weights and a cubic-centimeter graduate than without laudanum and bismuth. Furthermore, it is the duty of every official pharmaceutical and medical society, without reference to individual opinions, to exercise whatever power or influence it may have to compel adequate provision for compounding prescriptions by either the customary or the official method.

We have for several years made personal inquiry as to the equipment of any drug store to which our prescriptions might probably be taken, and, so far as possible, have not allowed them to be compounded in stores which were improperly equipped either in measures or drugs or at which a conspicuously irregular trade was carried on. Doubtless there is truth in the argument which some physicians have advanced that druggists thus treated will not send patients to us, but our personal relations with reputable pharmacists have been uniformly pleasant, and we doubt whether the man who caters too much to others is the permanent gainer thereby.

Students have often said: "I believe in the metric system, and when I get out of college I am going to learn to use it, but here I am taught in the old way, and I must know that anyhow." The representatives of the medical profession have formally adopted the metric system, not for the benefit of old practitioners, but for the sake of those who may enjoy the advantages of the new without the trouble of unlearning the old. The family physician may write his prescriptions as he pleases, and no one is the wiser except the druggist who compounds them; but the man who accepts the privileges of a professor should realize his responsibilities also. His students should have the benefit of everything that is new and good. Directly or indirectly they pay their teachers for being abreast of the times, and they are defrauded to just the extent that the latter allow the inertia of habit to carry them by their duties to the present and future.

Bits of Natural History.

In old age the height of man diminishes.

The skin is the only part of the human body that is not hardened by age.

The tail of a beaver is a regular trowel and is used as such.

Carnivorous animals seldom produce more than two young at a birth.

The flesh of the boa constrictor is eaten by the aborigines of Brazil.

The bones of very aged persons are said to have a greater proportion of lime than those of young people.

The lowest order of animal life is found in the microscopic jelly-fish. It is simply a minute drop of gelatinous matter.

The Call of Duty.

Friend—Your husband seems ill.

The Minister's Wife—He is overworked but he will take no rest. Three nights last week he insisted on going to see those hateful living pictures in order to more effectively denounce them from the pulpit.—*Puck.*

THE PREVENTION OF DIPHTHERIA.

The following is furnished for publication by the New York Health Department:

NEW YORK, Sept. 28, 1894.

CHAS. F. ROBERTS, M.D., Sanitary Superintendent—

Sir: We desire to direct the attention of the Board of Health to the necessity for the adoption of some more adequate means to prevent the extension of contagious diseases in tenement houses and apartment houses, and particularly for the enforcement of isolation of persons sick with these diseases. The methods which have been long employed in the Health Department, *i.e.*, frequent visitation and instruction by Department Inspectors, have been found to be only partially effective. It has been the custom for years, in cases of contagious diseases, for the Inspectors of the Department to visit the families of the sick persons, inform them as to measures of disinfection and methods of isolation, and at the same time to notify other families in the house of the existence of a case of contagious disease in a given apartment. This method of giving publicity to the case and of warning other occupants of the house is ineffective in the accomplishment of the desired end; *i.e.*, the complete isolation of the patient and the prevention of further infection. Notifying all the inmates of a large tenement is a very difficult matter, and, if notified, experience has shown that they soon forget the existence of illness in the house. Repeated inquiries have demonstrated the fact that frequently many of the inmates of the house where there is a case of contagious disease do not know of the existence of any sickness.

Further than this, this method fails entirely to protect strangers or visitors who may go to the house or apartment. Ladies in search of servants have been repeatedly found in houses or in apartments where cases of contagious disease were present, and servants who have been living with families where there are cases of contagious disease, on obtaining situations frequently go to their employer's house carrying infection with them; or, when relieved from duty for an afternoon or evening, visit where there are cases of contagious disease and not infrequently carry infection back to the houses in which they are employed. Very commonly, washing or various kinds of sewing is secretly done by other members of the family in apartments where such cases are ill, and the garments thus infected on the premises are later returned to the owners. In small shops, business is sometimes carried on, and in one of several instances recently, a number of cases of diphtheria were directly traced to an infected candy store.

Notifying inmates of the house is ineffectual, further, because it has been found that, as a rule, intercourse of families in tenement houses is not with others in the same house, but with families who live in other houses, and the latter are entirely unprotected by the methods at present followed.

It has seemed to us, after careful consideration of this subject, that the desired object would be best obtained by the placarding of apartments in tenement houses where cases of contagious disease exist, and we therefore have the honor to recommend that hereafter the Chief Inspector of Contagious Diseases be authorized, in his discretion, to placard apartments in tenement houses where there are cases of contagious disease. The following considerations may render more apparent the necessity for this action:

1. Under the present conditions it is impossible to prevent strangers and visitors from entering apartments where there are cases of contagious disease, and they or their clothing thus frequently become infected, and either they contract the disease themselves or they transmit it to others. These strangers or visitors are usually not aware of the existence of disease in the house or apartment, and unwittingly expose themselves and act as media for the dissemination of the disease. If apartments were placarded, this means of dissemination would be prevented.

2. In diphtheria, as has been repeatedly and abundantly shown by the investigations of this Department, patients are often apparently well long before they are free from the infectious agents, and in spite of repeated warning from Department Inspectors these patients, especially when children, mingle with other children and thus transmit the disease to

them. This is one of the most common and important means for the dissemination of diphtheria, and it is of no less importance in scarlet fever and measles, as in the latter diseases desquamation frequently continues many days after the patient has apparently quite recovered.

3. There are at present no means by which other inmates in tenement houses can know when convalescent cases of contagious disease have ceased to be dangerous. They can only be governed by appearances, which, as we have seen, are deceptive. If apartments where cases of contagious disease existed were placarded, isolation would be enforced by the other occupants of the house until the Department Inspectors allowed the placards to be removed.

4. The moral influence of such placards, both upon the inmates of the apartments, the inmates of the house and strangers or visitors to the house, would be of as great service in enforcing isolation and preventing extension of disease as the visits and instruction of our inspectors. It has been found impossible, even where daily visits were made by medical inspectors, assisted by the Sanitary Police, to enforce the isolation of children convalescing from diphtheria and scarlet fever after the serious symptoms have disappeared. It is undesirable at such times, unless absolutely required, to remove such patients to the hospital, and yet in the eruptive fevers this is the period of the disease when there is greatest danger of transmission to others.

During the last year we have had a serious epidemic of diphtheria to deal with. The number of cases reported weekly during the last months, however, has steadily decreased. The schools have just now opened, and it seems to us that the most strenuous efforts should be made to prevent a new outbreak of the disease or its reintroduction to the schools. This measure would be of undoubted service in accomplishing the desired object.

We would recommend, however, that placards should be nailed to the outside doors of the apartments in which cases of contagious disease are present, when in the judgment of the Chief Inspector of Contagious Diseases this course seems to be desirable, and that the placards should bear the following inscription, differing as to the name of disease in question and as to color. The color for diphtheria should be white; for scarlet fever, red; for measles, blue.

"DIPHTHERIA.

"All persons not occupants of this apartment are notified of the presence of diphtheria in it, and are warned to avoid entering it until this notice is removed. The persons sick with diphtheria must not leave as long as this notice remains here.

"The removal or defacement of this notice is forbidden.

"By order of the Board of Health.

"——— ———, President.

"——— ———, Secretary."

For some months in certain classes of tuberculosis the system of placarding apartments has been authorized and employed by the Health Department, and has proven very satisfactory in the attainment of the object desired. The only objection apparently to be urged against this measure is that the inmates of the apartment may object to the publicity thus entailed. This, however, is exactly the object which the measure is justly and properly designed to subserve, and is, in our opinion, the strongest argument in favor of its adoption. Respectfully submitted,

(Signed) HERMANN M. BIGGS,
Pathologist and Director of the Bacteriological Laboratory.

A. H. DOTY,
Chief Inspector of Contagious Diseases.

The above report was approved by the Board of Health Department of the City of New York at a meeting held on September 28, 1894.

(Signed) EMMONS CLARK,
Secretary.

Alcohol.

The lamp wick does not burn so long as there is oil on it. As the oxygen which reaches the wick is not sufficient to burn both the oil and the wick, the oil, being most inflammable, is burned, leaving the wick merely charred. So if some highly oxidizable substance, as alcoholic drink, is taken into the system, it will be oxidized first, leaving the proper food elements of the body only "charred," or incompletely oxidized.

IN the treatment of alcoholic habits, don't forget the necessity for excessive nutrition of some kind easily appropriated.

ABSTRACTS.

TUBERCULOUS CATTLE.

A dispatch from Washington is to the effect that as soon as the appropriation of $100,000 in the agricultural bill becomes available, the Bureau of Animal Industry of the Agricultural Department will begin an investigation of the prevalence of tuberculosis among cattle. The investigation will be commenced among herds from which Washington itself gets its supply of milk. Various herds in that section of the country have been inspected and tested from time to time with startling results. A herd ten days ago on a farm in the District was found to have 80 per cent. of its animals infected; and a few days before that no fewer than 90 animals in a herd numbering 125 near Richmond, Va., were discovered to be diseased. These are extreme and unusual cases, it is true; but occurring synchronously within a narrow radius, they were enough to rouse the Government to a sense of the danger to which the country is exposed from this source. An experiment performed by one of the scientists attached to the animal industry laboratory about the same time tended in the same direction of alarm. Ascertaining from test experiments which he had been making with the milk supply of the capital that it was tainted with tubercle, though perhaps not tainted sufficiently to be very dangerous to human health, he inoculated a guinea-pig with the milk; and, sure enough, after a few days, when the tubercle bacilli contained in the milk had had time to plant themselves and develop in his system, the rodent exhibited unmistakable tuberculosis. Concurrent circumstances like these, forced on the attention of the Government, produced the belief that it was about time a general investigation of diseased cattle should be made, if the danger to human health so portended would be avoided.

The way in which cattle are diagnosed most easily and most surely for tuberculosis is by the inoculation of them with an infinitesimal quantity of a preparation of which we heard much more a few years ago than we hear now—Koch's tuberculin. Tuberculin is a pretty expensive drug, costing $8 for about a teaspoonful. The Government prepares considerable quantities of it and distributes it free among State boards of health and live-stock commissioners. Inoculated with tuberculin, cattle straightway declare whether they are infected with tubercle or not, by the reaction that follows or fails to follow the inoculation. Now tuberculin has been furnished to twenty-three of the forty-four States of the Union, and the tests which have been returned to the Government from these States, although they have not nearly all been returned yet, show conclusively that the disease is spread among cattle throughout almost the entire Union. In fact, the probabilities are that it will be found that 5 per cent. of all the cattle in the United States are suffering more or less with tuberculosis!

That is the alarming state of things of which the Government will have to take account, and for which it will some way or other have to devise a remedy. It cost $1,500,000 to eradicate contagious pleuro-pneumonia from United States herds, and the amount of contagious pleuro-pneumonia was not a tithe of the amount of tuberculosis which at present exists. So many milch kine alone are infected with it, says Dr. Salmon, of the Bureau of Animal Industry, that if they be all killed "fresh milk will cost as much as champagne." It woulk be well for us not to forget that of all our cattle, and especially of all our milk-givers, at least 5 in every 100 are infected with tuberculosis; which disease, appearing most commonly as consumption in the human subject, is easily communicable both through meat and through milk. Common prudence would suggest the necessity, therefore, of boiling all milk before it is administered to anybody.—*Public Opinion.*

Bed-Sores.—Bed-sores may often be aborted if, as soon as the skin becomes red, a solution of the nitrate of silver, of the strength of twenty grains to the ounce, is applied locally to the parts; but this will not be effective in cases of paralysis.

SOCIETY REPORTS.

PHILADELPHIA COUNTY MEDICAL SOCIETY.

Meeting of October 10, 1894.

Dr. G. E. Shoemaker read a paper entitled

DESTRUCTIVE LESIONS IN ACUTE TUBAL INFLAMMATION.

(See page 645.)

DISCUSSION.

DR. M. PRICE: I have been much pleased with the report and with the success of both operations. I think that I cannot exactly agree with the doctor in considering a case of eighteen days' duration as altogether acute. Many of these cases go on to a fatal termination before going to such a length of time. I have seen cases of gonorrhœal salpingitis where the gonorrhœa had existed only a few weeks, and the ovarian and tubal trouble only a few days, when the tube was removed with pus pouring from its end. The gonococcus would probably have been found in great numbers if it had been looked for. In this case there was a general peritonitis with inflammatory lymph covering the intestines in twenty-four to thirty-six hours. I remember three cases of forcible dilatation where general peritonitis with pus pouring from the tubes at time of operation existed eight days after dilatation. I believe that many of these cases which ended fatally are considered to be cases of appendicitis. I have also found many of these cases of pelvic trouble complicated with appendicitis. A few months ago I operated on a woman who had for years suffered with so-called appendix trouble. The principal evidence in favor of this was the position of the woman, who bent over to the crippled side with her hand in that position. At the operation the tube was found fused to the ovary. It is often impossible to say in these cases whether the primary disease was in the appendix or in the tube. In these cases recovery is rapid because the patient has been prepared for a certain amount of suffering, and the peritoneum has been educated, as it were, to bear almost anything.

The only thing that I can criticise, and I can do that conscientiously, is the use of gauze drainage. If glass drainage alone had been used it could have been removed at the end of thirty-six hours. There is always sloughing and dirt following gauze drainage. While I use it in abscesses where the peritoneum has not been opened, I insist on its removal at the end of twenty-four hours, and its reapplication. Where gauze packing is used within the peritoneum the membrane is exposed to injury, and the viscera are wounded in its removal, as it adheres to everything, and its removal requires considerable force, unless it is left for a long time. With gauze drainage you run fifty per cent. more risk of death than if glass drainage alone has been used.

Dr. Senn has recently asserted that glass drainage causes fecal fistulæ. I can select the cases that are going to have a fistula. At time of operation in cases of abscess of the ovary or tube allowed to run on for a long time, with several attacks of pelvic inflammatory trouble, you will often find a necrotic bowel requiring the use of the Murphy button for resection. If glass drainage is used with care and the tube properly placed, the chance of avoiding a fecal fistula is very good, and the patient is safe. In a case operated on during the past year I was sure that there would be an injury to the bowel, for the abscess on the left side had several times discharged through the bowel, and I knew that there was a sinus or such adhesions as would necessitate wounding the rectum. In this case a drainage-tube was placed in the left cul-de-sac, and within forty-eight hours feces poured out by the tablespoonful. That case went on as nicely as could be, and recovered. I could point out four or five cases in the past year where before the operation was completed we had every reason to expect fecal fistulæ, and in every case recovery occurred without difficulty.

Where feces is discharged through the drainage-tube a little different treatment is required. The tube should be left

until you are sure that the drainage tract has been mapped off from the general peritoneal cavity. The treatment of this drainage tract is a matter for consideration. It should not be touched with a syringe, or any attempt made to clean it below the skin. If you do you will have complications and injury to surrounding viscera, giving a fistula which is incurable. All these cases should get well, and the charge that the drainage-tube is responsible for fecal fistulæ, I think, is a great mistake. I have seen thirty fecal fistulæ, and every one has healed under the treatment mentioned.

Dr. G. G. Davis: My observation does not correspond with that of Dr. Price, that fecal fistulæ always heal. I have seen several fecal fistulæ the result of abdominal operations that have not gotten well. I cannot see why the simple cleansing of a fecal fistula should retard its healing, and I do not believe that it does. Dr. Price's objection to the use of the syringe may be a good one if the nozzle of the syringe is long and it is thrust in deeply and sufficient manipulation made to materially disturb the parts; but that would be followed by hemorrhage, and I think that no one in cleansing the parts would use such violence. If all the cases that Dr. Price has seen recover, his sources of information must be more limited than mine have been.

Dr. Price: Dr. Davis states that he has seen cases that did not get well, and he admits that the syringe was used, and this was a good reason for the failure to close. Every fistula which is syringed does badly. The kind of fistulæ that do not get well are those due to tuberculosis. There is also another class that do not close, and that is those where there are sloughs of the bowel from injury, and the bowel is in close contact with the skin, and there is no intervening tissue which can bridge over the opening. These will not heal without operation, but deep fistulæ, not tubercular and where the lumen of the bowel is sufficiently large, always recover.

Dr. James M. Brown: I was much interested in Dr. Shoemaker's allusion to the relation between appendicitis and ovarian and tubal trouble. Two cases of appendicitis, among several that I have had in the past year, I believe to be the result of primary pelvic trouble, probably ovarian trouble. In both of these cases operation proved the presence of appendicitis. The point I wish to make is that in these cases the probable cause was primarily some pelvic inflammatory trouble. A third case still under observation had recurrent attacks of appendicitis with each menstrual epoch for a number of months. Then the attacks became more frequent and occurred between the menstrual periods. For the past two months there have been no attacks. I grant that it requires some care to distinguish a condition of this kind occurring in connection with the menstrual epoch, but I think that the diagnosis has been positively made, and if there is recurrence of the attacks operation for removal of the appendix will be done.

Dr. H. A. Slocum: I would ask Dr. Shoemaker if he has determined the cause of the rapid change in the case reported; whether it was due to the condition of the patient or to some particularly malignant germ. The history of the first case emphasizes the necessity of taking special care in the treatment of cases of miscarriage, and, if possible, to thoroughly cleanse the uterus and thus prevent troubles which may follow long afterward.

Dr. Shoemaker: In reply to Dr. Slocum I would say that the rapid growth of the abscess is not without its analogy in other parts of the body where there is no dense fascia, and where the tissues involved are only connective, muscular or glandular. We have the rapid formation of large abscesses, the material in which comes from the degeneration of the cell infiltration after inflammation.

The question of the use of gauze drainage in tubal and ovarian inflammatory troubles does not often come up in operations, as total removal and careful toilet usually suffice. In this case the adhesions looked so black that I hesitated to trust glass drainage alone, and the result made me satisfied with what was done. I do not recall that I have had to use gauze drainage in a tubal or ovarian pus case before, and I hope never to do it again; but we all know by experience its value in some forms of appendicitis. If a handkerchief of gauze is used, with a ligature attached to its center inside, and this is stuffed with strips, the removal is facilitated.

Dr. James K. Young gave an

EXHIBITION OF CASES ILLUSTRATING THE OPERATIVE TREATMENT OF ILIAC (SPINAL) ABSCESSES.

(See page 648.)

DISCUSSION.

DR. WILLIAM J. TAYLOR: I wish to thank Dr. Young for bringing these cases for us to see. I have used this method of treatment several times in the last year with good results. There is one point to which I desire to call attention, and that is that instead of the curette I have used with advantage pieces of gauze on long forceps, and swabbed out the whole interior of the abscess. In that way you remove a large amount of granulation tissue containing tubercle bacilli. With this method I use thorough flushing with plain boiled water, the water being allowed to flow while the gauze-curette is being used.

With regard to the length of time that the drainage-tube is allowed to remain, my experience is that the sooner you get rid of the drainage-tube the better. With the method to which I have alluded I find that within a week, sometimes in a few days, I can remove entirely the drainage-tube, and although there is some discharge, the amount is small and the recovery is rapid, considering the extent of the disease.

DR. G. G. DAVIS: I think that the question of operation depends upon the peculiarities of the case. I should be inclined to leave the abscess alone where I thought it was not enlarging or that it would ultimately be absorbed. I think that it is hopeless to attempt to cure them by any direct action upon the diseased part. As Dr. Young has said, the attempts in the way of curetting have been failures, and any operative procedure that attempts to eradicate the bone disease will likely be a failure. If the abscess is small and does not show a tendency to increase, I believe that it would be better to let it alone. I remember two cases in which, after opening, the discharge continued profuse, and death occurred. I do not believe that the discharge is kept up by the condition of the abscess cavity, but by the tuberculous process in the bones themselves. While I should not hesitate to operate in a rapidly growing abscess in an individual more or less healthy, and where the promise of repair is moderately good, yet in such a case as I now have under observation, an adult, with probably some tubercular changes in the lung, who now has a fistula in ano, a tuberculous testis, and an iliac abscess on the right side, I have no doubt that if this abscess were opened the suppuration would be prolonged and the retrograde changes would be hastened. If, as I have said, the individual were moderately healthy and capable of reacting, I should do as Dr. Young has done.

DR. JOHN B. ROBERTS: I am interested in two points of the discussion. One is the expression of the opinion that a good many of these cold abscesses, or tubercular abscesses, should probably be allowed to go without opening because of the probability of absorption taking place. My own feeling has been that so few are absorbed that as soon as I see one I have been inclined to incise it, as the risk under antiseptic treatment is so slight. I should like to hear this point developed a little more.

The statement as to the rapidity with which these tubercular abscesses heal after opening, with only a small sinus and a moderate amount of discharge remaining, is interesting to me, because that has not been my experience, probably because I have not treated them so satisfactorily. I should like to hear this brought out more thoroughly.

The more radical operations of curetting and cutting down and trying to get rid of the carious bone, which have been vigorously advocated, does not seem to meet with the approval of the members who have spoken. That is a comfort to me, as it has been my practice to refuse such operations.

DR. M. PRICE: I have no experience in spinal surgery, but the observation of these two cases would lead me to send such cases to the man who would treat them in this way. Dr. Davis' criticism as to operation is in a measure outside of the scope of this discussion. It is a question whether or not you can benefit a man with tubercular deposits in various parts of his body. Pus is a foreign body, and it is doing damage no matter what part of the economy it is in, and should be removed. The fact that the patient is weak and broken down is no argument against operation. If there are any cases that would suggest waiting it would be the strong and vigorous, those who can combat disease and resist the poisonous effects of absorption of pus. My feeling is that we

should always remove pus, and drain if we can. I see no reason why the treatment laid down by Dr. Young is not the proper treatment in spinal diseases where the result will be fatal if the large majority of cases are left to nature. Even if a large proportion died it would be no argument against operation. I believe that the two cases shown are one of the best arguments in favor of this method of treatment. Both of the children show that they are in good condition. I am surprised that Dr. Davis should recommend the leaving of a large abscess, poisoning the patient under the possible chance of recovery. The pus is dangerous and should be removed. It is so in the pelvis, and the spine is no exception.

Dr. Davis: I am not aware that I said anything derogatory to Dr. Young's views or his method of treatment. It is simply a choice of cases. I believe that in Dr. Young's cases the choice was properly made. Against the adoption of incision in all cases of abscess I did speak. Dr. Price has asked the reason why we should leave pus. The pus of cold abscess is different from that of acute abscess. I cannot recall any case of acute abscess where I should hesitate to leave pus out, and when it comes to abscess in which the active organisms which were largely instrumental in the production of that abscess are dead, then you have simply a foreign body, a foreign body which is liquid to a great extent, and which at times does become absorbed, and one should consider well before opening it. In deciding whether or not to open these abscesses, I laid stress upon the condition of the patient. Dr. Roberts, with his usual modesty, suggests that some lack in his operative procedures may account for some of the results that he has had, but I am sure that all of us know the care with which he attends to his cases, and that this is a very insufficient explanation to account for their continued suppuration. The rest of us can take it for granted that if such results occur in the hands of a surgeon as careful as Dr. Roberts, they are as liable to occur in our hands. There are certain cases of abscess in connection with bone in which, if the abscess is opened, suppuration is thereafter continuous and more or less profuse, and in a markedly tuberculous patient will not infrequently lead to death.

I have no doubt at all that absorption of pus does take place, but, as Dr. Young pointed out, where the abscess is large and there is danger of rupture into adjacent cavities, or where there is a rapid increase in size, the indications for relief are clear. I should not expect absorption in such cases, nor should I hesitate to operate. Where the abscess shows no tendency to increase, particularly in a weak strumous individual, I should certainly adopt a conservative policy.

The President, Dr. De Forest Willard: I do not believe in allowing pus to remain in the body. As soon as we are certain that pus exists in any cavity we should adopt measures for its removal. In regard to the old theory that hectic fever resulted from these incisions—that was simply septic fever. A temperature sheet, such as has been shown, where after the operation the temperature on only one occasion reached 100°, shows that "hectic" fever is preventable. Moreover, in many cases where before operation the temperature has been from 103° to 104°, on the day following incision it will be found below 100°. This temperature of 104° burns the life out of these cases, and these are the ones that should be operated on to get rid of the poison. Tuberculous pus is dangerous if allowed to remain; it is a focus of disease, and from it new foci in other parts of the body may be developed. Therefore I believe in incision under thorough aseptic and antiseptic precautions, with thorough drainage and thorough curetting where it is possible. There is one caution to be observed when making through-and-through drainage—care should be exercised in the use of the curette on the peritoneal side of the abscess. The curette may cause little perforations, and then if, as is sometimes done, peroxide of hydrogen is injected, small quantities of pus may be forced through these openings.

These wounds can be kept aseptic. I know of cases that have been discharging for months, yet the wound has been kept absolutely aseptic, but if a fresh suppurative process is engrafted on these sinuses there will be a serious drain, and probably great danger to the patient. I am thoroughly satisfied at the operative treatment, not that it cures the original disease, but it relieves the drain on the patient, diminishes the fever, and, if accompanied by proper fixation and by hygienic measures,

permits the patient to become hearty and strong, in place of the wretched, worn, exhausted individual which we so often see as the result of poisoning from the absorption of tubercular pus.

Erosion of the vertebræ is a dangerous and also a difficult operation, and in the end the surgeon is never certain that he has eradicated the disease. That is the real objection to erosion. If we could be certain that we could remove all the disease, it would be worth all the time, trouble and risk which are required to reach the source of trouble. I do not believe that there is any operator so adept as to be able to work entirely around in front of the body of the dorsal vertebræ. I certainly have never succeeded except in cases where there has been a large deposit of tuberculous matter and where the body of the vertebræ has been broken down. In healthy dogs I have tried over and over after removing the head of a rib, but never succeeded without getting into the pleural cavity. In one case where there was a large tubercular mass in front of the vertebræ, pushing the pleura forward, I was able to pass a loop of tubing entirely around.

DR. YOUNG: The conservative method is a well-accepted form of treatment. There are on record two well-authenticated cases in which recovery followed where there were large abscesses in this region and the patients refused operation. They are those of Dr. Taylor, of New York, and the case recorded by Bradford and Lovett. Two years later the abscesses had disappeared. I have now under observation a case in which there was a large abscess which has now disappeared.

In speaking of rapid cures in these cases, I was speaking as a surgeon in chronic cases. By "rapid cure" a chronic surgeon would mean months. These cases discharge for six or eight months, perhaps a year longer. I am inclined to think that these cases represent a special group of cases—that they are iliac abscesses similar to psoas abscesses, and not to be distinguished from them except that very early we notice psoas irritation in these cases. The first symptom may be irritation of the psoas muscle, as demonstrated by the inability to extend the thigh beyond the normal line. Then, upon palpation, possibly a deep abscess may be discovered within a few days. Then the abscess will become larger, and this is the time for operation. In all these cases apparatus was applied early and continued. As soon as possible after operation a plaster jacket was applied, and afterward a plain brace or support of some kind.

EVIL RESULT OF OSTEOTOMY.

THE PRESIDENT, DR. DE FOREST WILLARD: I wish to show you a case which came under my notice a few days ago, and which illustrates one of the bad results that may follow osteotomy. I believe most enthusiastically in osteotomy for the correction of deformities, and in ninety-nine cases out of one hundred one can obtain capital results without pus. This case was operated on by another surgeon, and was done some years ago. You will observe that the limb is greatly atrophied and deformed. There is scarcely any muscular tissue left. The cicatrix is also exceedingly sensitive. I fear that ultimately amputation will be required. Although I am a strong advocate of the operation of osteotomy, I think it well to know the other side of the question. I presume that in this case septic infection with sloughing occurred. In the last three years I think that I have not seen a single drop of pus after an operation of this character. Every one has healed as a similar fracture of the leg.

DISCUSSION.

DR. WILLIAM J. TAYLOR: I have never seen such a result as has been shown following osteotomy, nor have I seen any pus. I have seen, however, in one case of simple fracture with no external wound, the patient die of pyæmia, the direct result of the fracture, and the post mortem showed extensive septic inflammation.

Dr. Willard discussed

ILIAC ABSCESSES, NON-SPINAL IN ORIGIN.

(See page 650.)

DISCUSSION.

DR. M. PRICE: Some time ago, while in Muncy, I fell in conversation with a man who in early life had hip disease. A few years ago a tumor appeared on the previously diseased side, and he came to Philadelphia and was examined by a dis-

tinguished surgeon, who told him that he had tuberculosis, and that the result would be fatal and nothing could be done. He consulted others, but no one would operate. He returned to his home and spent three or four months in bed. He insisted that the mass should be opened, but none of the local physicians would do it. Finally he took a razor and went in above Poupart's ligament, and at once a large quantity of pus escaped. In six or eight weeks he recovered and has since remained well. I have no doubt that that was an abscess of the character of which Dr. Willard speaks. We should never turn away any of these cases without a thorough investigation.

The other day a case came to the hospital. He was an epileptic, and fifteen weeks ago had fallen from a cherry-tree. A week later a tumor developed in the splenic region. On examination I thought that he had a splenic abscess. I made a small incision and two or three quarts of peritoneal fluid escaped. The peritoneum had evidently been injured, and a localized peritoneal dropsy had been the result.

I was recently asked by Dr. Keller to assist him in opening an abscess of the kidney. We carefully cut down on the abscess and evacuated two or three quarts of pus. The finger could be passed over the crest of the ilium toward the pelvis. The boy made a good recovery. This was evidently another case due to injury.

Dr. William J. Taylor: I have only one case bearing on this subject. An Italian, while lifting a heavy weight, felt something give way in the right side. In two weeks a tumor appeared midway between the anterior superior spine and the umbilicus. This gradually increased in size. I saw him in consultation, and came to the conclusion that it was some form of abscess. I made an incision and found a very extensive abscess extending around toward the right kidney, but outside of the peritoneum, evidently a perinephritic abscess. With drainage he recovered and the wound healed nicely, and he had no trouble for eighteen months. Then the whole thing recurred, and six weeks ago I again operated on an abscess in the same position. In three weeks it healed absolutely, and he is again well.

Dr. H. A. Slocum: I recall two cases presenting symptoms similar to those of iliac abscess. One was in an English-woman with a large scar in the iliac region, the result of an operation in England four or five years ago. I assisted in the second operation for inflammation in the right side, and found remains of the broad ligament in the scar on the left, showing that the abscess had been connected with the pelvis. In another case, which had been under observation for eight years and in which I advised operation, the symptoms presented before operation might have been mistaken for those of iliac abscess. The tubes, ovary and omentum formed a large mass which raised the abdominal wall three-fourths of an inch in the left iliac region. The whole mass was found agglutinated and was removed. She is now perfectly well, three years after operation.

Dr. James M. Brown: I can recall two cases from traumatism. The first case was that of a man who while supporting a heavy weight felt something give way in the left iliac region, incapacitating him for work for a few days. He afterward was compelled to give up work, and in a few months an abscess formed and opened above the crest of the ilium posteriorly. This man refused operation and died with albuminuria. In the second case the man fell, striking the left lumbar region. Here the same course of events followed, with the exception that the opening occurred anteriorly and the man recovered.

Dr. Willard: My object in calling attention to this group of cases was simply to emphasize the fact that abscesses in this fossa may occur independently of spinal, hip, tubal, or appendiceal disease. These cases show that abscess here is like other abscesses. I believe that pus in the body is harmful; if we can evacuate it safely we should do so, and as soon as it is probable that pus is present we should make an incision and explore. This prevents the abscess from extending and burrowing, and avoids the danger from high temperatures.

Dr. A. J. Downes exhibited a specimen of a

PULMONARY CALCULUS.

Mrs. R., aged eighty-nine, while eating breakfast on Saturday morning, September 29th, in her usual health, had a severe coughing spell. During the following

few days she had several similar spells. On Thursday, about 4 P.M., I was present during the worst and last one. While listening to the chest during this attack I found no air entering the left lung. The attack ended with a copious discharge of muco-purulent matter, slightly blood-tinged, which striking the basin gave a sound. It contained the calculus I present. Quite too large, it would seem to be cast up from the left bronchus, where it evidently had been. The patient has hardly coughed since, and has been entirely free from a bronchial irritation and expectoration she suffered from for about fifteen years.

DR. FRANCIS RUDEROW: I recall the case of a negro, forty-two years of age, admitted to the Episcopal Hospital with nephritis. He also had attacks of spasmodic asthma, and insisted that when the attacks came he felt a blocking in the region of the right bronchus. He suddenly died, and on autopsy we found a curious calcareous deposit in the left bronchus an inch and a quarter in length. This blocked the bronchus entirely and was undoubtedly the cause of death.

FOODS OF THE FUTURE.

"What will the man of the future eat?" The answer to this question has been undertaken, not by an imaginative writer, but by one of the greatest of living men of science, Professor Berthelot, of Paris; and it may be said at once that but for his scientific eminence and the undeniable facts upon which he bases his forecast, it would pass the limits of human belief. The epicure of the future is to dine upon artificial meat, artificial flour and artificial vegetables; drink artificial wines and liquors, and round off his repast with an artificial tobacco beside which the natural tobacco of the present will seem very poor.

Wheat-fields and corn-fields are to disappear from the face of the earth, because flour and meal will no longer be grown, but made. Herds of cattle, flocks of sheep and droves of swine will cease to be bred, because beef and mutton and pork will be manufactured direct from their elements. Fruit and flowers will doubtless continue to be grown as cheap decorative luxuries, but no longer as necessities of food or ornament. There will be in the great air trains of the future no grain or cattle or coal cars, because the fundamental food elements will exist everywhere and require no transportation. Coal will no longer be dug, except perhaps with the object of transforming it into bread or meat. The engines of the great food factories will be driven, not by artificial combustion, but by the underlying heat of the globe. In order to clearly conceive these impending changes, it must be remembered that milk, eggs, flour, meat, and, in fact, all edibles, consist almost entirely (the percentage of other elements is very small) of carbon, hydrogen, oxygen and nitrogen. Oxygen and hydrogen are the two gases which, when combined, form water. Oxygen and nitrogen mixed are the air we breathe. Carbon forms the charcoal of wood, is the main constituent of coal, and as carbonic-acid gas in the air is the chief food of the vegetable world, these four elements, universally existing, are destined to furnish all the food now grown by nature, through the rapid and steady advance of synthetic chemistry.

Synthetic chemistry is the special science which takes the elements of a given compound and induces them to combine and form that compound. It is the reverse of analytic chemistry, which takes a given compound and dissociates and isolates its elements. Analytic chemistry would separate water into oxygen and hydrogen, and synthetic chemistry would take oxygen and hydrogen, mix them, put a match to the mixture and thus form water. For many years past synthetic chemistry has had an eager eye upon food-making. It has already progressed so far that several great agricultural industries have been destroyed by its advancement, compounds which were once obtained by plant growth in the fields being now entirely furnished by chemical laboratories and direct manufacture.—*Public Opinion.*

PERISCOPE.

IN CHARGE OF WM. E. PARKE, A.M., M.D.

MEDICINE.

Cold Water as an Antipyretic.

Dr. Fisher has arrived at the following conclusions:

1. That cold water is the best antipyretic used to-day.
2. That it is easily obtainable, and is therefore adapted to all classes of cases, both rich and poor.
3. The mode of application is so simple that it adapts itself to the hospital, and equally as well to private practice, and can be applied without any distinct training.
4. Cautiously given it stimulates.
5. Carelessly used and longer than required, it depresses, and will produce subnormal temperature.
6. That rectal temperature should be taken, and the bath at once discontinued when temperature falls to 101°, as it will then continue to fall.
7. That a stimulant administered before the bath may be necessary, and should be given where there is a feeble heart.
8. That the temperature indicates when to commence, and when, also, to discontinue the hydropathic treatment.
9. Unnecessary blanketing after the bath is injurious, and will produce copious perspiration, which I believe weakens the patient.
10. The temperature of the room should always be between 68° and 72°.—*Post-Graduate.*

Poisoning by Guaiacol.

Prof. Oscar Wyss (*Deutsche Medicinische Wochenschrift*) cites the first fatal case of guaiacol poisoning and directs attention to the toxic symptoms as follows:

A girl nine years of age, who had been accidentally given 5 c.c. (75 drops) of guaiacol. In a short time she became unconscious; the conjunctivæ became injected, the corneal reflexes diminished and the pupils no longer reacted to light; there were frequent attempts at vomiting and the saliva flowed from the mouth in large quantities. The pulse became rapid, the sensibility of the skin much diminished. Finally the patient began to vomit; the physician detected the odor of guaiacol. The stomach was washed out, but she did not rally. The cyanosis gradually diminished, and instead of it a deadly pallor was observed; the respiration became frequent. Three and a half hours after the guaiacol had been swallowed the patient passed 100 c.c. of brownish-red urine.

The spleen and liver soon enlarged, and the temperature fell to 35.5° C. (96° F.) and small hemorrhages were observed upon the skin of the arms and legs. The urine contained albumen, blood and casts, and Ehrlich's carbolic acid test was positive.

Jaundice soon appeared, the stupor increased and the patient died on the third day.

The autopsy revealed an acute gastritis and enteritis, parenchymatous degeneration of the liver, acute hemorrhagic nephritis, parenchymatous degeneration of the heart muscle, and ecchymoses in the pleura, peritoneum, endocardium and pericardium. The spleen was much enlarged. Kobert in his text-book on "Intoxicationen" points out that after 1 gram (15 drops) doses of guaiacol slight appearances of poisoning may supervene. These are characterized by a burning feeling in the stomach, nausea, etc. In one case in which 15 grams (3¾ drachms) were accidentally taken by a patient in the Dorpat Clinic, the stomach was immediately washed out and the patient was rescued. However, unconsciousness set in, the pupils became contracted, the breathing irregular and the intensely dark appearance of the urine was very noticeable.—*Canada Lancet.*

Advice as to Stimulants.

In a very interesting work by Dr. George Herschell, of London, called "Health Troubles of City Life," the writer says: "Stimulants never increase the natural capacity of the brain. They can only abstract for the purpose of work in hand some of the energies which are sorely needed to repair and restore a brain which has already been taxed to the furthest limit which is consistent with health. To remove the sense of fatigue caused by overwork by the consumption of alcohol is to close one's ears to the voice of nature. The weariness of the brain is a protest against further exertion until recuperation has been obtained by rest; and if the weary feeling is deadened or destroyed by adventitious means, nature will exact her penalty. When the overworked man of business, having been on his legs all day and feeling fit to drop, with a sensation of 'all-goneness' about the region of the stomach, rouses himself with whatever he is in the habit of taking, be it whisky, champagne, or even tea or coffee, he does not add one atom of force to his stock of energy, although he fancies he does, but having put to sleep his sense of weariness, simply appropriates some of his reserve for the present necessity. He has accepted a bill at a short date to which a ruinous rate of interest is attached, and his resources will not allow him to make many repetitions of the experiment. His account at the bank of life will soon be overdrawn. Alcohol cannot add one iota to his reserve of nervous energy, but it may delude him into exhausting it. The busy man should once for all rid himself of this fancy that he can create by artificial means an abnormal store of brain-power. He cannot enlarge the limits which nature has set up."—*Canada Lancet.*

Vomiting of Pregnancy.

Lutaud (*Rev. Obstet. et Gyn.*) states that vomiting of pregnancy is best treated by cocaine. The action of this drug is often strengthened by combining it with antipyrin. Thus the following prescription:

Chlorhyd. cocaine.....	gr. iss
Antipyrin.....	gr. xvj
Aq. dest.....	ʒ iv

Sig.: Teaspoonful every half-hour until the vomiting ceases.

If the stomach will not tolerate this quantity of liquid, 10 drops of a one and a half or two per cent. solution of cocaine are administered, repeated at one or two hour intervals.

At times the application of cocaine to the os is extremely valuable. The following prescription may be used:

Hydrochlor cocaine.....	gr. xvj
Ext. bellad.....	gr. iv
Vaseline.....	ʒ ss

Cotin's method of dilating the os with the finger sometimes causes immediate cessation of vomiting. Occasional success will follow Routh's procedure, which consists in exposing the uterine neck by means of a speculum and painting with tincture of iodine. In cases of moderate severity the following mixture will be found serviceable:

Tinct. iodine.....	ää ʒ ij
Chloroform.....	

Sig.: Five drops night and morning at meal-times, taken in seltzer-water.

—*Thera. Gazette.*

Bradycardia of Convalescence.

Dehio, quoted in *Deutsche Med.-Zeit.*: Slowing of the heart's action may be produced either by a lesion of the motor structures in the organ itself, or by irritation of the inhibitory fibers of the vagus, or relative paresis of the augmentor fibers of the sympathetic. We possess in atropin, which paralyzes the nerve-endings of the vagus in the heart, a means by which we can determine whether the slowing is cardiac or extracardiac. If, after the injection of atropin, the pulse beat is considerably accelerated, the fundamental condition is extracardiac.

The slow heart of convalescence is generally associated with a subnormal temperature, and does not continue, as a rule, beyond a few days or a week. It is sometimes interrupted for a time by a normal or even hypernormal pulse rate, the interruption being either transient or lasting for hours or even for days. The pulse is generally small and easily compressible, often dicrotic and sometimes irregular. Disturbances in the general condition and organic changes in the heart are wanting in the slighter cases. In other cases there may be observed all the symptoms of an acute though not necessarily very severe cardiac debility—irregular action of the heart, increase of the cardiac dullness, with systolic murmurs over the left heart. In such cases the bradycardia is not an independent functional anomaly, but only one of the phenomena of the debilitated state of the heart. Atropin accelerates the pulse to a much smaller degree in bradycardia of convalescence than it does in good health. This refractoriness of the heart toward atropin is proof that the condition under consideration is not due to irritation of the vagus, but to something in the heart itself; and it is to be taken as an expression of debility of the organ. This is not due to demonstrable changes, such as myocarditis, which have been described as occurring after infectious diseases, but rather to the action of ptomaines upon the heart.—*Glasgow Medical Journal.*

Virulence of Poison Ivy.

Poison ivy and the characteristic inflammation produced by it are known in different localities by several aliases. It appears not only as a vine but as a bush of considerable size, and grows abundantly almost everywhere.

The virulent principle of this plant, says an eminent specialist on diseases of the skin, is a volatile acid which exists in all its parts, especially in the leaves. All persons are not affected by it; some handle it with impunity. Actual contact with the plant is not always necessary for the production of the poisonous effects on account of the volatility of its active principle, and there is good reason to believe that persons sensitive to the poison not infrequently suffer from passing by places where the vine grows abundantly.

The plant is supposed to be most actively virulent during the flowering season, in early summer, but cases occur with great frequency during autumn. Even in winter twigs and stems are alive to mischief to those who handle them.

One writer tells of a patient who cannot drive through the woods where the poison sumach grows without subsequently suffering with the characteristic inflammation, and that in merely passing to the leeward of a field where the farmers were burning brush has been sufficient to evoke the eruption. The poisonous influence of the plant is transmitted with the greatest facility on clothing and other articles in use.—*West. Med. Rep.*

Treatment of Vaginitis.

Lutaud (*Revue Obstetricale et Gynecologique*): The treatment of vaginitis differs little, whether it be simple or specific. The physician should, above all, consider the *acute* and *chronic* vaginitis in the therapeutical point of view.

(*a*) *Acute Stage.* — Here the speculum should not be employed. The patient should be kept as quiet as possible, and walking, coitus, and all physical exercise forbidden. Frequently repeated injections (every six hours) with Esmarch's douche with two liters of a one per cent. solution of boric acid. Emollient injections, such as starch, flax-seed meal, or decoction of poppy heads, may also be employed. If paln is severe, one of the following suppositories is given every evening:

Ext. opii.....	centigm. j
Ol. theobrom.....	gms. iv

M. Ft. supposit. no. 1.

This may be replaced by a little injection

containing 15 drops of laudanum. For bladder symptons (tenesmus, pain during micturition), poultices, with laudanum sprinkled over them, bromide of potassium, emollient drinks, and alkaline diuretics are to be prescribed. It is well in these cases to discontinue wine, but light tea may be taken.

(*b*) *Chronic Stage.*—An injection three times a day is to be given with one of the following:

Acid carbol....	gms. v
Alcoholis.....	gms. x
Ess. thym.....	gtts. xx

M. For two quarts of water.

Hydrarg. bichlor	centigms. xxv
Acid. tartaric	gm. j

M. For two quarts of water.

Potas. permanganat.....	gms. x
Aq. dest.....	gms. cc

M. A tablespoonful for two quarts of water.

This last is the best remedy for gonorrhœal vaginitis; if it did not soil linen, it would be perfect. In rebellious cases, or when it is necessary to act rapidly, a Sims speculum is introduced and the vagina is painted with a solution of nitrate of silver (2 grammes in 30 grammes of water).

Before withdrawing the speculum, a large tampon imbibed with the following is introduced:

Acid. tannic.....	gms. ij
Cocain. hydrochlorat.....	centigms. x
Glycerini.....	gms. cxx

The tampon should be left in place for two days. No matter what may be the treatment applied in chronic vaginitis, the cure may always be hastened by the vaginal dressings, which isolate the parts and absorb the secretions. Simple dry cotton tampons are good, but when made with iodoform or salol gauze are preferable.—*Annals of Gynæcology.*

Acute Anterior Poliomyelitis.

Von Kahlden (*Centralbl. f allg. Pathologie*) reviews recent writings on the morbid anatomy of this disease, with special reference to its parenchymatous or interstitial origin. In three of Rissler's cases death occurred from six to eight days after the onset. Here there was advanced degeneration of ganglion cells, but very little change in the interstitial tissue. Rissler concludes that Charcot's view that the primary lesion is in the ganglion cells is the correct one. Two other cases in which death occurred after seven weeks and eight years respectively are reported by the same writer. From his own three cases, all of some years' standing, the author also adopts Charcot's view, as neither the destruction of ganglion cells in groups nor yet the relatively very slight disappearance of nerve fibers was to be explained by a primary interstitial lesion. In two cases of old amputation the author also saw this atrophy of ganglion cells in groups. He records an investigation into two further cases of what he terms "atypical poliomyelitis." Goldscheider concludes from his case that some irritant having established itself in the vessel wall led to marked vascular dilatation and endothelial overgrowth, which spread to the neuroglia. The author points out that Goldscheider here uses the term "inflammation" in quite a new sense. Dauber, from an examination of a case of five days' standing, maintains the interstitial origin of the disease. The author would class this case, as well as Redlich's, as atypical. Siemerling maintains that in his two cases of ten days' and eight months' standing the disease was an acute myelitis, the anterior horns being chiefly involved. The interstitial change along with the vascular lesions showed, according to this writer, that the supporting tissue was the chief seat of the disease. The author thinks that the value of quite recent cases has been overestimated in settling this question. It is, then, often open to doubt whether the disease is really poliomyelitis, or they may be atypical cases. Slighter cases should be used to determine the starting-point of the disease. The author attaches overwhelming importance to the disappearance of ganglion cells in groups. He maintains that any lesion affecting these cells secondarily through their blood supply must be diffuse. There is no evidence why a non-corpuscular irritant circulating in the blood should involve not only the spinal cord alone, but so small a part of it as the anterior horns. The rapid onset of the disease is not explained by a secondary affection of the ganglion cells. The author refers to the intact condition of many nerve fibrils in this relation. He maintains that in his own and other reported cases the changes in the interstitial tissue do not need the assumption of an interstitial origin for anterior poliomyelitis.

Treatment of Mumps.

Dr. A. Martin (*Sem. Med.*): During a recent epidemic of mumps among soldiers, the author successfully resorted to the following treatment:

From the outset, he instituted buccal antisepsis, which, when rigorously done, according to his observations, diminishes the chances of testicular complication. He therefore had his patients gargle and cleanse the mouth as often as possible with solutions of thymol, carbolic acid or very hot 4 per cent. boric-acid solution.

Besides, during the first days of the disease he administered antipyrine in daily doses of 2–3 grammes (30–45 grs.). This, he states, more rapidly effects the resolution of the inflammatory process than do sodium salicylate and other remedies; moreover, it acts more promptly on the fever and pain.

In orchitis caused by mumps, pilocarpine subcutaneously in doses of 1 centigramme (1–6 grs.), repeated once daily, is said to have promptly diminished the pain from the first evening on, and to have lowered the temperature, which became normal on the third day. The swelling of the testicle disappeared between the eighth and tenth days. After the acute period of orchitis was passed, the patient was submitted to a tonic treatment (cod-liver oil, nux vomica, cinchona extract, meat powder, sulphur baths, etc.) for the purpose of preventing testicular atrophy.

What Cases Shall We Send to Colorado?

Dr. J. N. Hall (Texas *Sanitarium*): As this is quite a fair though slightly biased statement of the indications pointing to the high altitude of Colorado, it is deemed worthy of an extensive recapitulation.

1. *Phthisis.*—(*a*) The great benefit is obtained only when sent in the incipient stage. (*b*) Those cases in which digestion is fair do the best. (*c*) Little advantage to fibroid phthisis.

2. *Acute Pneumonia.*—Do badly if sent before resolution has occurred.

3. *Emphysema.*—Is generally contraindicative of heights in general, and Colorado is no exception.

4 *Chronic Bronchitis.*—Especially when bronchorrhœa is present does splendidly.

5. *Dyspnœa.*—Generally speaking, this symptom is really intensified by high altitudes anywhere.

6. *Pleurisy.*—Cases requiring tapping so commonly show tubercular trouble that they had better be sent as early as possible after the tapping, as prophylactic measure.

7. *Asthmatics.*—Advantages to these patients as a class very questionable.

8. *Disease of Circulatory Apparatus.*—High altitudes is a menace to all such subjects.

9. *Chronic Malaria.*—These cases do well, as they will in any non-malarial climate.

10. *Gynæcological and Nervous Cases.*—No advantage to these.—*Am. Pract. and News.*

A New Treatment of Tapeworm.

Dr. Dronke, in the treatment of tapeworm, associates the three most powerful tenifuges, thus hoping to obtain a more active therapeutic influence. His formula is:

Honey	ʒ v
Ethereal ext. pomegranate..	ää gr. vijss
Eth. ext. male fern	
Kousso flowers	ʒ v

M. Sig.: Divide this into three parts and take them in the morning with intervals of ten to fifteen minutes, the day before the patient living, of course, on a reduced diet.

One or two hours after taking the preparation administer an ounce of castor oil. Have the patient pass his stools into a vessel filled to the brim with warm water to avoid breaking the worm.—*Lancet Clinic.*

Electricity in Amenorrhœa.

Panecki (*Therap. Monatsch.*) has found electricity, and particularly the faradic current, the most successful means of dealing with amenorrhœa. It is necessary that the poles should be introduced into the uterus and be allowed to act there. This treatment is well borne, and the current can be increased at each sitting, the number of the latter required averaging from five to thirty, and their duration five to fifteen minutes during successive days. The author's experience includes 18 cases in which the cure of the condition was established a year or more ago, the patients still remaining well. One of these, a married woman aged 31, had never menstruated, though she was subject to periodical affections (severe headache, etc.). The treatment on various lines had extended over six years, but with absolutely no success. The author, at the expiration of one of these periods, commenced the application of the faradic current, and after twenty-eight successive sittings a small flow became apparent. During the following interval six more applications were made, and the patient is now well and relieved of all symptoms.—*British Med. Jour.*

Salicylic Acid in Acute Rheumatism.

Dr. Bourget (*Rev. de Ciencis Med. de Barcelona*) concludes as follows: Absorption of salicylic acid by the skin is very rapid and intense. The skin of youthful individuals is most absorbent, while persons with white skins are more so than those with brown or black. The rapidity and intensity of its action are dependent upon the vehicle in which the acid is dissolved. and of these agnine is the best. Fatty substances greatly facilitate its penetration through the skin, while with glycerine or vaseline it is less. Treatment of acute articular rheumatism with a salve of salicylic acid and agnine is recommended. It is less serviceable in other forms of rheumatism, though it might be of value as an adjunct in massage. In general rheumatism it is inactive.

A Case of Angina from Copaiba Balsam.

A young man, 22 years of age, took copaiba and eubeb opiate for some days for blennorrhagic urethritis. On the seventh day appeared a confluent exanthematous rash, simultaneously with redness and congestion of the pharynx, palate and tonsils. The uvulva was enlarged from œdema. Over the whole surface of the mucous membrane of the throat appeared a miliary eruption. The third day after the appearance the eruption disappeared. The patient had constant mouth-breathing and consequently chronic pharyngitis, due to post-nasal obstruction from adenoid vegetations.—*Bulletin Med.*

Vomiting of Pregnancy.

Dr. Berry, in the *Memphis Med. Monthly*, says that where the patient is of a nervous temperament, cannot retain even a sip of tea or water, a formula composed of 1 ounce of fluid extract of valerian, 16 minims of Fowler's solution of arsenic, and 1 drachm of sodii bicarb. has never failed in his hands of producing prompt relief, when given in teaspoonful doses every two or three hours.

To Hide the Taste of Chloral.

Dr. E. Holland calls attention to the fact that the taste of chloral hydrate is effectively masked by lemonade. Two or three drachms of the syrup should be placed in a tumbler with about 2 ounces of water. If to this is added about 2 ounces or so of gaseous (bottled) lemonade, the mixture may be drunk at leisure, and the soporific action of the drug is in no way impaired.—*Med. Bulletin.*

PATHOLOGY.

The Diphtheria Bacillus.

Abel (*Deut. med. Woch.*) refers to the fact that diphtheria bacilli may be found in the throat and nasal secretion after the end of the disease, and when the patient is apparently well. The period during which such patients can convey the disease lasts only a short time, corresponding apparently at most to five weeks. The author, however, reports a case in which these bacilli were found sixty-five days after the disappearance of the membrane from the throat. There was at this time a fibrinous exudation in the nose from which they could be cultivated and experimented with. It has been shown that the nasal mucous membrane is a good cultivation soil for the diphtheria bacillus. This case was an example of a fibrinous rhinitis upon a diphtherial basis. Nasal diphtheria is a rare disease, with fœtid nasal discharge and severe symptoms. Fibrinous rhinitis is also an acute process, but the pharynx escapes and the temperature and general condition remain undisturbed. It appears in most cases to be a mild form of diphtheria, but it is not always so, for other micro-organisms may excite it. Patients suffering from it are not suspected and may thus convey the disease to others. The author thinks that diphtheria patients should not be discharged until a bacteriological examination has proved the absence of diphtheria bacilli. Experiments show that the bacilli cultivated from fibrinous rhinitis are virulent. The author records such a case in a boy, aged 9 years, in which colonies of virulent diphtheria bacilli were found along with the strepto and staphylococcus The boy had not suffered from diphtheria, but his mother had just recovered from it. The bacilli disappeared when the membrane did. The author refers to another similar case, also proved to be due to the diphtheria bacillus.

Contagiousness of Cancer.

At the eighth meeting of the French Congress of Surgery, held at Lyons, October 9th to 13th (*Sem. Med.*, 10th), Guelliot, of Reims, presented a communication embodying the results of an inquiry as to the contagiousness of cancer begun in 1891. The number of cases collected by him in which cancer appeared to have been communicated by contagion was forty. In the author's opinion his facts show: 1. That cancerous affections are unequally distributed in adjoining districts, and that neither heredity nor consanguinity is adequate to account for this. 2. That there are real cancer houses, the dwellers in which, though having no link of blood relationship between them, are successively or simultaneously attacked by malignant tumors. 3. That cases of cancer atttacking two persons living together are relatively frequent. Of 100 such cases, published and unpublished, in 85 the persons attacked were man and wife; in 8 they were medical practitioners who had been specially engaged in the treatment of cases of malignant disease. According to the author these facts tend to show that cancer is transmitted, directly or indirectly, and that it runs its course as an infectious disease with the average incubation of from a few months to two years, a primary lesion, then generalization. In discussing the paper, Delore, of Lyons, stated that cancer seemed to him capable of being transmitted by pregnancy. Fifteen years ago, at the congress of Blois, he had brought forward a case in point.

THERAPEUTICS.

Lactophenin.

Roth (*Wien. klin. Woch.*) discusses the use of this drug in acute rheumatism. It has hitherto been chiefly used as an antipyretic, hypnotic and antineuralgic. The author draws attention to the occasional failure of the salicylates in acute rheumatism, and to the dangers at times attending the use of antipyrin, antifebrin and even sulphonal. He has noticed after lactophenin a temporary feeling of weight and heat in the epigastrium, which has disappeared on further use. Occasionally there has been some cyanosis, but without other symptoms. The dose given has been from 5 gr. to 1 gr., and this may be increased up to 6 gr. in the day. He refers to the use of this drug in enteric fever by v. Jaksch. Lactophenin has also been used in pneumonia, influenza, erysipelas, acute febrile tuberculous affections, scarlatina, sepsis, and acute and chronic rheumatism, but the number of cases of acute rheumatism is small. The author gives details of 8 cases of this disease, and refers to 20 more in which he has used lactophenin with good results. He concludes (1) that the pain and swelling disappear generally within forty-eight hours; (2) that the temperature continues low; and (3) that no unpleasant by-effects were observed, notwithstanding large doses. He has also found lactophenin useful in some cases of chorea and in the pains of locomotor ataxy. Lactophenin is worthy of being placed along with the salicylates as an antirheumatic.

Menthol in Diphtheria.

F. Kastorsky (*Vratch*, No. 24, 1894) reports 37 cases of diphtheria (in 3 adults and 34 children) treated and cured by painting with a 10 per cent. alcoholic solution of menthol. The paintings, by means of a piece of cotton wool, were usually carried out three times daily. In some cases, however, a single free application was followed by complete disappearance of false membranes within two days. A marked improvement in the patient's general condition was invariably noticed from the beginning of the treatment. The same simple method was successfully practiced by the author in numerous cases of anginas of various forms, and by Trutovsky in a group of cases of scarlatinal diphtheria. The paintings are said to be painless and quite harmless.

Duboisin as a Hypnotic

P. S. Skuridin (*Vratch*, 1894, No. 21) used hypodermic injections of duboisin in 21 cases of sleeplessness in the insane, the dose varying from $\frac{1}{150}$ to $\frac{1}{75}$ grain, and the grand total of injections amounting to 360. In 153 (42 per cent.) cases the duration of induced sleep exceeded six hours, while in 126 (35 per cent.) it oscillated between four and six hours, and in 62 (18 per cent.) was under four hours. In 19 (5 per cent.) the drug failed altogether. The writer comes to the following conclusions: (1) Duboisin will occupy a prominent place among hypnotics for the insane; (2) the best results may be expected in epilepsy, periodical insanity, and acute mania and mental confusion; (3) the hypnotic effect is a secondary phenomenon, developing consecutively to the subsidence of a motor or muscular excitement. Hence the drug proves most useful in insomnia caused by intense motor excitation. In sleeplessness depending upon illusions, hallucinations or organic brain disease, but unaccompanied by distinct motor disturbances, the remedy remains inefficacious; (4) the drug is free from accessory ill effects.

Treatment of Seborrhœic Eczema in Children.

Feulard (*Jour. des Prat.*) observes that attention must be given in the first place to the diet, which should be limited to milk, with the addition, in older children, of eggs. In the local treatment the first step is the removal of crusts, which may be effected by using warm coal-tar lotions, preceded, if necessary, by poultices. After the crusts have been removed he uses gauze compresses soaked in a solution of resorcin (6 in 1,000). These are kept constantly applied to the scalp by day, and are applied frequently to the face. By night an ointment is used, consisting of one part of balsam of Peru to 30 parts of vaseline. Later he uses fine starch powder or a powder consisting of equal parts of starch and carbonate of bismuth. Recovery is rapid if the instructions as to diet are strictly observed and the dressings used with regularity.

GYNECOLOGY.

Treatment of Distention of the Fallopian Tubes.

At the late meeting of the American Association of Obstetricians and Gynæcologists Frank. A. Glasgow, of St. Louis, read a paper which was intended to bring berore the profession a method of curing tubal distention by means of intrauterine treatment in contradistinction to cœliotomy and removal. By this means the uterine ends of the tubes are made more patulous, and a discharge takes place from the tube through the uterus. The author called attention to the fact that the tubes, so far as his observation goes, are always pervious at the outer extremity of the cornu; hence, when removing them, we must always clamp them before cutting. The obstruction must be within the uterine wall, probably in the endometrium; hence gonorrhœal inflammation is not an adhesive inflammation, and therefore it does not follow that the tubes have a true atresia following this inflammation. His opinion was that the closure is due to a swelling of the endometrium, and hence a closure at the uterine end takes place. When this inflammation and swelling are overcome by pressure and antisepsis the tubes become patulous again. The intra-abdominal pressure will cause fluid in any pendent portion of the tube to ascend into the uterus. The foregoing procedure can be carried out in three different ways: 1. By gradually packing with gauze without anæsthesia. 2. By rapid dilatation of the cervix and packing with gauze after curetting. This is done under anæsthesia. 3. The author's own method of dilating by means of antiseptic or sterilized elm-bark tents. These tents are small strips of elm bark, made just long enough to enter the cervix completely and not press on the fundus. They should be kept in an alcoholic solution of mercuric chloride (1 to 4,000) and have a short string attached, by means of which they may be withdrawn. They are partially broken in a number of places for the purpose of making them more pliable. They may be dipped into glycerine or water just before introduction. These tents may be used when it would be impossible to pack with gauze. He had treated twenty or more cases during the past year, and did not recall one in which he did not get some discharge from the tent. All the cases were either cured or very much benefited.

Cancer of the Pregnant Uterus.

Hernandez (*Archives d'Obstet. et de Gynec.*) concludes, from personal experience and statistics, that the following rules should guide: 1. In any case where cancer is detected in pregnancy the uterus and appendages should be removed at once if possible, whatever be the stage of gestation. 2. The surgeon should be careful to prevent all contamination of the operation wound by cancerous products and to remove the whole new growth. 3. Having isolated the new growth by a few sutures, he should, in a case in the first three months of pregnancy, perform vaginal hysterectomy; after the fourth month Mackenrodt's abdominal hysterectomy will be called for. Before the middle of the seventh month the uterus is to be removed at once, although the child may be alive. If the child be viable, Cæsarean section must first be performed, the uterus being removed afterward. 4. When the cancer is too advanced to allow of its removal, the surest way to save the child must be considered. 5. Early diagnosis can alone insure anything like a definite cure, hence it is our duty to look out for uterine cancer in pregnant women. In conclusion, in order that we may learn how far a permanent cure is possible, all cases should be accurately recorded. The state of the operation cicatrix should be reported when death occurs after recovery from the operation.

SURGERY.

Appendicitis.

W. G. McDonald, of Albany, presented to the American Association of Obstetricians and Gynæcologists a paper embodying the results of a clinical study of 84 cases. He thinks that out of the great mass of literature on the subject three important landmarks are established: 1. That for all practical purposes all inflammatory processes in the right iliac fossa arise from the appendix. 2. That practically the appendix is always intraperitoneal, and that any operation undertaken for appendicitis that does not involve the entering of the peritoneum is false in its surgical conception. 3. That idiopathic peritonitis does not occur. That many cases diagnosticated as such are really cases of perforating appendicitis. The author classified the varieties: 1. Acute perforating, fulminating appendicitis with general peritonitis. 2. Acute suppurating appendicitis with local plastic peritonitis and abscess. 3. Subacute appendicitis, variously termed catarrhal, chronic, relapsing or obliterating appendicitis, or appendicular colic. The perforation occurs very much earlier than is commonly believed. Acute suppurative appendicitis with local peritonitis presents the most favorable field for operation during the attack. The removal of the appendix is to be undertaken with great circumspection when it lies in the walls of an abscess cavity. The third group of cases does not require operation during the first attack, but if repeated attacks occur, operation during quiescence is demanded. Operative results in these cases are most favorable.

Cancer of the Kidney.

Alm (*Hygiea*) publishes the following case: A man, aged 39, had for six or seven years been subject to recurrent attacks of hæmaturia, at first only a few times yearly, but during the last three years oftener. The attacks came on independently of exertion or any other cause, and were not, as a rule, preceded or followed by any pain. Between the attacks the urine had been normal, but it had during the last years shown a trace of albumen. Only once, a few years ago, had he passed a small stone, the size of a pin's head. No tenesmus, not even during the attacks. Three years ago a hardening began to be felt under the right costal margin, and this has gradually increased in size until a year ago, since which time the patient thinks it has increased more rapidly. The tumor has never been tender, but on examination there has been slight pain. As the attacks of hæmaturia have become more frequent, the patient's general health has been reduced. The tumor, which could be felt midway between the costal margin and Poupart's ligament, was hard and almost round, the size of a man's fist. It was freely movable and could be pushed up so that its upper part disappeared under the costal margin. Its surface was somewhat uneven. The ascending colon ran obliquely across it. Nephrectomy was performed, as the left kidney was found normal and no metastases were detected in the peritoneal cavity. The patient made an uninterrupted recovery. On examination the tumor was found to be a primary carcinoma. That the hæmaturia from the first, six or seven years ago, was caused by the malignant new growth the author believes for the following reasons: There had never been any symptoms of stone or disease of the bladder. All the symptoms pointed to the kidney being the cause of the bleeding. Only once a very small stone had passed, but too small and smooth to cause hæmaturia; in the extirpated kidney there was no concretion found, and in the left none could be felt. Although cases of hæmaturia occur when on laparotomy nothing pathological can be detected, when as in this case a malignant tumor appears after a few years' time, is it rash (the author asks) to conclude that this has been the cause of the hæmaturia from the first?

Congenital Dislocation of Hip.

Bradford (*Ann. of Surg.*), from a general review of the literature of the subject and from his own experience, comes to the following conclusions: (1) That the methods of treatment by traction, or by mechanical means, crutches, splints, recumbent traction, with or without tenotomy, do not effect a cure; (2) correction by means of forcible reduction without incision can be applicable in but few cases and is not reliable; (3) that the method of operative reduction offers the best prospect of a cure. The method at present, however, involves risks and is not certain in its results, but it is to be expected that further experience will give greater precision and more certain results, as no inherent difficulties lie in the way of operation; that the condition of the shortening of the muscles, the shortened condition of the anterior bands of the capsular ligament, forms an important obstacle to complete reduction, and that these fibers should be thoroughly divided, and this is best done, according to the author, from in front rather than from behind. Myers (*ibid.*) discusses the same subject. Of 113 cases of which he has notes, in none of them was there pronounced flexion or adduction; 31 per cent. suffered from pain at times, especially during periods of very rapid growth. The attacks of pain were generally recurrent, and these cases seemed to show a considerable amount of shortening. The author thinks it improbable that the true reposition can be made without an open operation, since the originally shallow acetabulum is generally still further filled up, and the hour-glass form of the capsule would itself prevent replacement. By conservative treatment a great deal can be accomplished for these cases in some instances. In view of the good results already obtained by operation, and the even more promising character of the latest reports, we may, the author thinks, undertake the treatment of these cases with the assurance that we can benefit them very materially in a comparatively short time.

Strophanthus in the Treatment of Dipsomania.

Dr. Skworzow accidentally discovered the value of this drug in a case of an old toper of sixty-three, who, during dipsomaniac attacks, was accustomed to drink large quantities of brandy. Strophanthus was given on account of weak heart's action and an intermittent pulse, in doses of 7 drops three times a day. After the first dose the patient was seized with nausea, and had such a repugnance to alcohol that he stopped its use then for good. In two other cases he also succeeded by the use of this drug in aborting the attack at once. In all these three cases it produced nausea and profuse sweating, which symptoms are rarely observed in abstemious persons. It is worthy of note that in none of these cases was the sudden withdrawal of alcohol followed by delirium, as is usually the case.—*Lancet Clinic.*

Painful Peritoneal Adhesions.

Nicaise (*Rev. de Chir.*) states that the use of antiseptic methods and the consequent development of antiseptic surgery have made surgeons better acquainted with peritoneal adhesions, and have led to their successful treatment by operation. These adhesions may give trouble by disturbing the functions of implicated organs, and by exciting pain. The painful sensations vary in character and intensity in different cases. They may be caused by displacement of the organs to which the adhesive bands are attached, or by constriction of the intestinal canal. The pains in the latter condition are often very severe, and of a similar nature to those of hepatic and renal colic. The diagnosis of peritoneal adhesions is often very difficult; in some cases their existence can be assumed only by a process of exclusion, while in others certainty as to their presence or absence cannot be attained except by an exploratory laparotomy. The author is of opinion, however, that a diagnosis may be made in many cases by close inquiry concerning such details as the previous occurrence of abdominal inflammation; the seat of the pain, and the relation of such seat to that of old inflammatory attacks; the time when the pain comes on with regard to the taking of food; and, in females, to the periods of menstruation. As many peritoneal adhesions become longer and thinner, and have a tendency to disappear, there should be no hurry in having recourse to operative treatment. When, however, they cause very severe and frequently renewed pain, although the compression of an abdominal belt or bandage or massage may give relief, the only method of dealing effectually with such trouble is the performance of laparotomy and the destruction of the adhesions. The cure that may be thus effected will be complete and permanent; but, it is pointed out, as laparotomy is a serious operation unless practiced under very strict antiseptic conditions, it ought not to be applied in cases of peritoneal adhesions unless these cause intolerable pain.

Arterial Catheterism.

In the *Progres Medical* there is an article on this subject by Professor Severeau, of Bucharest, who says that he thinks he is the first one to propose the practice of introducing a catheter into an artery in certain cases. He has practiced it in cases of grangrene due to embolism, as an adjunct to amputation of the mortified part. The procedure consists simply in inserting a small flexible catheter (rendered thoroughly aseptic by means of alcohol and carbolic acid) its whole length into the lumen of the artery by means of to-and-fro movements. When the blood begins to flow alongside of the catheter the latter is withdrawn and clots are then ejected from the artery, so that the course of the blood circulating in it is re-established. The capillary hemorrhage from the flaps then becomes more abundant and the tissues assume a brighter hue. To this procedure the author attributes it that he has ceased to encounter gangrene of the flaps and has obtained their union by first intention. Sometimes, he says, owing to adhesions between the clot and the wall of the artery, it is impossible to make the instrument penetrate the artery, and in such cases it is not uncommon to see a portion or the whole of the flap become gangrenous.—*Omaha Clinic.*

The Operative Treatment of Ulcer of the Stomach.

At the late congress of German surgeons, Knester reported the case of a 21-year-old man who showed symptoms of ulcer of the stomach soon after straining himself severely at lifting. A year or so afterward severe hemorrhage from the stomach occurred so frequently that the patient was brought to the point of death. The much dilated stomach was opened and a deep ulcer was found on the posterior wall near the pyloric end. This was thoroughly cauterized with the Paquelin, and as no opening into the intestine could be found a wide communication between the stomach and the jejunum was made. The patient recovered completeley and is able to do any kind of work.

BACTERIOLOGY.

Effects of the Sun on Bacteria.

The recent study of micro-organisms has explained facts which we know to exist, but for which no intelligent reason could be given. The power of the sun's rays in destroying or modifying the action of many of the innumerable varieties of micro-organisms has been demonstrated in a marked degree, especially by the experiments of Dr. Palermo, of Naples. It was found that Koch's cholera bacilli, now almost universally credited with producing cholera in man, and which are fatal to guinea-pigs in about eighteen hours, if exposed to the sun's rays from three and a half to four hours, were perfectly harmless.

In these experiments another fact was brought out which may prove of great importance. It was found that guinea-pigs in whom inoculation had produced marked attacks of cholera from which they had recovered were safe against any further attack, repeated inoculation producing no effect. If this is true of the pig, why may it not hold good in the human being, the inoculation not only producing a milder form of the disease, like kine-pox, but rendering it cholera-proof?—*Med. Times.*

OTOLOGY.

The Reciprocal Relations of the Two Ears.

Dr. Urbantschitsch, of Vienna, remarks that although the relations between the two eyes, especially the so-called sympathetic affections of the eye, have long been known, those between the two ears have hitherto attracted little attention. It seems, from the studies of the author, that they may often be demonstrated, and that they are sometimes of much practical importance.

In biauricular audition it has been already observed that an ear in which the hearing is notably diminished may exercise a stimulant influence upon the other organ. The treatment of one ear augments the therapeutic effect obtained on the other even when the treatment has no beneficial effect upon the hearing of the first. One fact, especially, possesses great interest, viz.: by an operative procedure upon the transmitting apparatus of one ear we may not only arrest the diminution of hearing upon the other side, but obtain a decided amelioration and sometimes a return to the normal condition.

These reciprocal relations between the two ears, and especially the synergistic effects of accommodation, deserve attention and permit the hope that we may sometimes intervene with success—at least, in one of the ears—in certain cases of progressive deafness.—*Revue de Laryngologie.*

ARMY AND NAVY.

CHANGES IN THE U. S. ARMY FROM OCTOBER 28, 1894, TO NOVEMBER 3, 1894.

Captain Walter W. R. Fisher, Assistant Surgeon, will be relieved from duty at Fort Columbus, N. Y. H., upon the expiration of his present leave of absence, and will report for duty at Fort Meade, South Dakota, to relieve Captain Norton Strong, Assistant Surgeon.

Captain Strong, on being relieved by Captain Fisher, is ordered to Fort Sheridan, Illinois, for duty at that post, relieving First Lieutenant George J. Newgarden, Assistant Surgeon.

Lieutenant Newgarden, on being relieved by Captain Strong, is ordered to Fort Wayne, Michigan, for duty.

So much of the special order as directs Captain Ogden Rafferty, Assistant Surgeon, to report to the commanding officer Presidio of San Francisco, California, for duty, is revoked.

Leave of absence for six months, on surgeon's certificate of disability, is granted Major Clarence Ewen, Surgeon.

So much of the order as assigns Major William H. Gardner, Surgeon, to Fort Custer, Montana, is revoked.

So much of the order directing Captain Alfred E. Bradley, Assistant Surgeon, to report for duty at Fort Keogh, Montana, is amended as to direct him, upon the abandonment of Fort Sully, South Dakota, to report for duty at Fort Custer, Montana.

Leave of absence for four months, to take effect upon the final abandonment of Fort Ontario, New York, is granted Major John V. Lauderdale, Surgeon U. S. Army.

NEWS AND MISCELLANY.

New York State Association of Railway Surgeons.

Fourth annual meeting to be held in the Academy of Medicine, 17 West Forty-third Street, New York City, Thursday, November 15, 1894.

PAPERS.

1. President's address, "Important and Unsettled Questions in Railway Surgery."

SPECIAL TOPIC.

2. Shall we amputate? Or shall we wait? When shall we amputate? (*a*) "Arguments Favoring Early Amputations," by Dr. W. L. Estes, South Bethlehem, Pa. Discussion by Dr. J. B. Murdoch, Pittsburg, Pa.; Dr. J. S. Wight, Brooklyn; Dr. A. P. Grinnell, Burlington, Vt. (*b*) "Arguments Favoring Delayed Amputations," by Dr. T. M. Manley, New York City. Discussion by Dr. C. M. Daniels, Buffalo; Dr. J. S. Wight, Brooklyn; Dr. A. P. Grinnell, Burlington, Vt.; Dr. J. B. Murdoch, Pittsburg, Pa. (*c*) "Technique of Amputation," by Dr. John A. Wyeth, New York City.

3. "Asepsis and Antisepsis in Surgical Work," by Dr. F. A. Stillings, Concord, N. H. Discussion opened by Dr. A. P. Grinnell.

4. "Special Features in Railway Surgery," by Dr. C. B. Herrick, Troy. Discussion opened by Dr. G. P. Conn, of New Hampshire.

5. "The Immediate Care of Railway Injuries," by Dr. J. A. Van Duyn, Syracuse. Discussion opened by Dr. Geo. Chaffee.

6. "Important Factors in Unusual Results Following Traumatisms," by Dr. R. S. Harnden, Waverly. Discussion by Dr. P. A. Skiff, Frankfort; Dr. C. S. Parkhill, Hornellsville.

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ORIGINAL ARTICLES.

THE CONDUCT OF THE MEDICAL STUDENT.*

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Gentlemen:—Let me give you hearty welcome to my lectures! Such greeting is both pleasure and duty.

But whether you have well come is a question which will be decided by each one according to his conduct during these six months of our association. If he prove indifferent to obtaining knowledge, negligent of opportunities, if wasteful of time, and, above all, if yielding to temptations to evil which so abound in a great city and appeal so strongly to young men, then he has ill come and should be condoled rather than congratulated. It is my desire in this hour to say a few words which may help, even in slight degree, to make you better students and better men, and protect you from some of the dangers which beset your path—dangers perilous alike to the physical, intellectual and moral nature.

In Swift's "Tale of a Tub" the author remarks: "The old Slavonian proverb said well that it is with men as with asses—whoever would keep them fast must find a very good hold at their ears." Every capable medical teacher desires to secure such good hold at the beginning, and keep it until the end of his lectures. Without faithful attendance upon instruction and diligent attention upon the part of students, it is the task of Sissyphus to teach and that of the Danaides to learn. The teacher and the pupil are mutually dependent—the one assists the other. Let us recognize this dependence, and pledge ourselves to common sympathy and help.

You are students of medicine, and two questions are suggested: What are students? and What is medicine? The word student, by its etymology, indicates desire, affectionate, eager, diligent application, strenuous strife and struggle. If the heavens fall we catch larks; but the heavens do not fall, and whatever good we get must be by effort, and the greater the good the greater the exertion necessary to obtain it; we must seek knowledge as one seeks hid treasure. To study successfuly means patient, persistent effort and the watchful use of time, so that no golden minutes are lost. It is said that Luther had inscribed upon the walls of his study, *Bene orasse est bene studuisse.* Do not hastily reject this assertion as the delusion of a fanatic or religious enthusiast. Remember that one of the greatest of English minds in the present century, Coleridge, declared: "Prayer is the highest energy of the human soul." The question of an objective reality corresponding to this exercise I do not now discuss, but that an important subjective influence thence results few are rash enough to deny.

Further, to be a good student there must be a sound mind in a sound body, and therefore see to it that you keep sound bodies. Unfortunately few men are so tempted to neglect the proper care of their own health of body as physicians and

*An address at the beginning of the course of lectures upon obstetrics, diseases of women and of children, Jefferson Medical College, October 4, 1894.

medical students. But you, who are future priests of Apollo, must be faithful worshipers of Hygeia. One thing of great importance in reference to bodily health is regular and sufficient time for sleep. One of our own guild, Sir Thomas Browne, has eloquently said: "Half our hours we spend in the shadow of the globe, and the twin brother of death exacteth one-third of our time." Eight hours' sleep is needed by the majority of students, and they who neglect this allotment sooner or later suffer, suffer in body and in mind; appetite and strength fail, and they lose clearness and quickness of mental vision; especially is this the case if the whole night is spent in study, working—

> "Till in the vault of heaven the stars decay,
> And the sky reddens with the rising day,"

and then snatching a few brief hours of sleep.

It is important, in studying, not to devote too much time continuously to the same subject, for, as when constantly gazing upon a single object the vision becomes confused and indistinct, so our intellectual sight is obscured by too long occupation with the same theme. It sometimes happens that one forgets a name, and the more he endeavors to recall it the more difficult and impossible the recollection; but let him cease his effort and direct his mind to something else for a time, and at its expiration it often happens that the name is recalled so quickly that the action seems spontaneous. Archbishop Whately has given this advice: "Never remain long puzzling out any difficulty, but lay the book aside and return to it some hours after, or next day, after having turned the attention to something else."

Remembering now that, as of old, much study is a weariness to the flesh and a weariness to the mind, too, exhausting it, recreation is necessary for the student, but let it be re-creation. Locke said that "whoever hopes to employ any part of his time with efficiency and vigor must allow some of it to pass in trifles." Such amusement or recreation must not interfere with the usual hours for rest, ought not to involve intellectual strain, or cause great nervous excitement, suggest impure thoughts, or excite sensual feelings, and if not always elevating to thought and feeling, at least ought never to degrade. Renan, in an address to students made not long before his death, said, "the joyous intoxication of the new wine of life, which makes you deaf to the cowardly complaints of the discouraged, is legitimate," and "the flowers have lost none of their beauty, nor the spring of its radiance." But let us remember that intoxication may bring delirium, and that swift and subtle poison may be concealed in the flower's fragrant beauty. Pitfalls for the unwary are numerous, and how many fall into them! There may be evil suggestions from companion, in the pages of a novel, or on the stage. How mistaken they are who "think that they shall taste the aconite and not die, or crown their heads with juice of poppy and not be drowsy." * So many different materials enter into that structure, personal character, which you build day by day, how watchful you ought to be that no thought or desire, no word or act of which, in the coming years, you will be utterly ashamed, make part of it. Juvenal said, *Nemo repente fuit turpissimus*, that is, the basest has not become such at once. Sir Thomas Browne expressed the same thought: "No one falls from virtue, like Vulcan from heaven, in a single day." Let the awful lapse be averted by preventing the first step.

Let us now, for a few minutes, consider the second question, What is medicine? The word is derived from the Latin word *medeor*, to cure, to heal; and *medeor* is from *madh*, which signifies to be wise, and from *madh* we have *madha*, the healing art. You thus see that, in its etymology, medicine is wisdom, not all wisdom, but a special department thereof. The essential objects of medicine are the prevention and cure of disease, the promotion of health and the prolongation of life. But what different conceptions of this department of human knowledge have been advanced by some! Thus, Swift speaks of one who held that anatomy was the ultimate end of physic, and Kilian, in the preface to a "System of Medicine," published at Jena in 1826, made this remarkabe statement: "The science of medicine does not exist in order to cure diseases, but there are diseases in order that there should be a science of medicine."

What changes in medicine and in medical teaching in this century! About a

* Jeremy Taylor.

hundred years ago Dr. William Shippen was teaching anatomy, surgery, and obstetrics in the only medical school in Philadelphia. Forty-two years ago I served several months as resident physician of Wills' Hospital, and not one member of the staff was a specialist in diseases of the eye; the staff consisted of surgeons and general practitioners, and they did their work quite as intelligently, so far as the knowledge of the day permitted, and probably operated as skillfully as the present members of the staff do. At that time there was not an ophthalmologist in the city. Now one or more ophthalmologists can be found on almost every chief street.

What changes in medical teaching in a century! How rapid the growth of specialism in forty years! These changes have greatly increased the work of medical students. The terms of instruction have been lengthened, and are one-third or one-half more, or doubled. The facilities for teaching have in all departments become greater. If you are required to study more subjects, and with more minuteness, you have a much longer time in which to do this.

While specialism is at once the proof and the power of the advance of medicine, this movement is not an unmixed good, so far as the complete and harmonious development of the doctor is concerned. A Hippocrates, a Sydenham, or a Harvey seems an impossibility in our age; with the many specialists an all-around man, one qualified to do good work in each of the various departments of medicine, will become exceptional in the cities; he will necessarily be found in the country chiefly, for the tendency now is toward not the formation of a polygonal personality, but to the making of one-sided men, or a sort of localized hypertropy in knowledge and skill. Goldsmith said, jestingly: "Is the animal machine less complicated than a brass pin? Not less than ten different hands are required to make a brass pin; and shall the body be set right by one operator?" I think the words of DeQuincey are true in regard to specialism in medicine: "This specialism is very advantageous so long as the subdividing principle does not descend too low to admit of a perpetual reascent into the generalizing principle which secures the unity of the science."

It seems to me that the analytic spirit has been carried quite far enough in medicine; and indeed it happens that one specialist sometimes invades the territory of another, and frequently encroaches upon the rights and duties of the general practitioner. Another danger arises from specialism, and that is the liability to exaggerate maladies of particular organs by the specialist, so that he may forget that there are other organs than a uterus, eye, throat, or stomach, etc., and also forget that the local disorder is, in many cases, the mere expression of a constitutional state, more appropriately treated by the family physician. So far as my observation permits me to judge, the best specialists have been those men who first spent several years in general practice.

The advance in surgery in recent years, thanks especially to anæsthesia and antisepsis, has been great and its triumphs wonderful.

Surgical operations are very attractive to students, but they are not the most important part of medical teaching. We may commend anatomical knewledge, admire operative skill, and especially be fascinated by the richer pecuniary reward which comes to the surgeon than to the physician—a gastric or intestinal catarrh requires far more knowledge and professional wisdom, and longer service, but is not half as profitable as an amputation. Surgeons, much oftener than doctors, have their achievements proclaimed in newspapers, usually without their connivance and greatly to their regret. Sometimes operations are done unnecessarily; they might have been averted by wise medical treatment, or are followed by inevitable death—a great operation, brilliant surgery, but the patient perished! I wish there were more surgeons to-day like John Hunter, who held the operative part of practice in the lowest estimation. He said: "To perform an operation is to mutilate the patient whom we are unable to cure; it therefore should be considered as an acknowledgment of the imperfection of our art." *

Concluding this topic, do not think surgery the chief thing in your studies, but

* In connection with the remark of John Hunter, we quote the following from Schopenhauer: "Our doctors have no longer the same classical culture as formerly, when it gave them a certain humanity and an elevated manner. Now they go as soon as possible to the university, where they only want to learn surgery, so that they may prosper on earth."

always let it have a much inferior position to the practice of medicine. Do not become specialists, at least, while you are students. As far as in you lies, let each be a complete man, *teres atque rotundus,* and not a local hypertrophy.

It is not the college that makes the able practitioner, but a man furnished suitable opportunities works out his own professional character, succeeding by what he is, and by the faithful use of his opportunities. The famous blue-grass pastures of Kentucky do not make the winning racer; a "scrub," though kept on them for years, will never get a prize, for, as George Eliot said, "breed is stronger than pasture."

The acquisition of useful knowledge is the chief end of medical study, and it is my strong conviction that if only such knowledge were taught by medical schools three years, the college session including at least eight months, would be sufficient for imparting it, if the students came thoroughly qualified for their study.

I have often thought that the advice of Lord Bacon might, in part, be applied to the reading of medical students: "Read not to contradict and confute, nor to believe and take for granted, nor to find talk and discourse, but to weigh and consider. Some books are to be tasted, others to be swallowed, and some few to be chewed and digested; that is, some books are to be read only in parts, others to be read attentively, and some to be read wholly, and with diligence and attention." Again, he said: "Some books also may be read by deputy, and extracts made of them by others; but that would be only in the less important arguments, and the meaner sort of books; else distilled books are like common distilled waters, flashy things." Does not the last statement seem prophetic, and have reference to the so-called medical quiz-books, the last refuge of ignoble minds about the time of examination, and in some cases, the liveliest hope of mental eunuchs for fame and fortune, place and power?

When we reflect that the most prolific producers of medical books usually are quite young, and that the motive for writing them is frequently purely selfish, we do not wonder at the multiplicity of books, most of them destined to death long before their authors. If all books, monographs, and contributions to medical journals that are essentially bids for place or practice were burned, a large amount of our literature would be gone, but in the end, while fewer books and journals would be published, they would be better ones.

In a previous part of this lecture allusion was made to special temptations occurring in great cities to young men. Among the gravest of these is that which invites to illegitimate sexual indulgence, and in speaking upon this subject plain words will be used. I trust that neither the theme nor the mode of treatment will be regarded as improper on the part of a teacher addressing medical students. Read the first chapter of Paul's Epistle to the Romans, and see how plainly sodomy and sapphism are spoken of as crimes of the day.

Professor Ribbing,* of the University of Lund, in a series of lectures to the students of the university upon Sexual Hygiene, 1889, remarked: "I do not know whether I am mistaken, but it seems to me that the sexual question is the root and the blossom, the beginning and the end of all morality." Surely, then, for your good, and for the good you may thereby be enabled to do others, a discussion of one phase of the sexual question, brief and imperfect as it must necessarily be, is right, and, I believe, needed.

Especially, as it seems to me, is there a strong demand for an exposition of what I believe the truth upon this subject, when doctrines subversive of morality, and tending to promote vice, are uttered by eminent writers, and even some members of the profession become practically advocates of prostitution. The following eloquent passage is from Lecky.† The author, after referring to the danger of "incursions of irregular passions in the domestic circle," says: "Under these circumstances there has arisen in society a figure which is certainly the most mournful, and in some respects the most awful, upon which the eye of the moralist can dwell. That unhappy being, whose very name it is a shame to speak, who counterfeits with a cold heart the transports of affection, and submits herself as the passive instrument of lust; who is scorned and insulted as the vilest of her sex, and doomed for the most part to disease and

* Professor Ribbing's lectures have been translated from the Swedish into German, and were published in Leipsig in 1892.

† "History of Morals in Europe."

abject wretchedness and an early death, appears in every age as the perpetual symbol of the degradation and sinfulness of man. Herself the supreme type of vice, she is ultimately the most efficient guardian of virtue. But for her the unchallenged purity of countless happy homes would be polluted, and not a few who, in the pride of their untempted chastity, think of her with an indignant shudder, would have known the agony and remorse of despair. On that one degraded and ignoble form are concentrated the passions that might have filled the world with shame. She remains, while creeds and civilizations rise and fall, the eternal priestess of humanity."* I shall presently quote in opposition to this view the words of an earlier, and I believe wiser, British moralist. Mona Caird† said a few years ago: "Prostitution is as inseparable from our present marriage customs as the shadow from the substance. They are the two sides of the same shield, and not the deepest gulf that ever held human beings asunder can prevent the burning vapors of the woman's Inferno which is raging beneath our feet from penetrating into the upper regions of respectability and poisoning the atmosphere."

When one of the old philosophers, Cato, I believe, was asked what he thought of usury, he replied: "What do I think of murder?" If doctors were asked what they thought of prostitution, very many, possibly the majority, would answer that it is a necessary evil; and some few would state that they prescribed illegitimate sexual indulgence for some of their patients; indeed, such advice was recently given by a contributor to an American medical journal in the treatment of onanism. Sir James Paget, on the other hand, condemns such counsel:* "Many of your patients will ask you about sexual intercourse and expect you to prescribe fornication. I would just as soon prescribe theft and lying or anything else that God has forbidden. Chastity does no harm to body or mind; its discipline is excellent; marriage can be safely waited for; and among the many nervous and hypochondriacal patients who have talked to me of fornication, I have never heard one say he was better or happier for it."

Mantegazza says:† "Do not cure onanism by prostitution, but cure the vice by virtue."

Max Simon, speaking of prostitution as a therapeutic agent, more especially in aphrodisia, remarked:‡ "Behold a new branch of therapeutics; it is pornotherapeia. Science makes the lorette prophylactic; she ought hereafter to be found in the laboratory of the pharmacist, occupying a place between phosphorus and copaiba."

Professor Ribbing, from whose work I have previously quoted, makes the following observations upon prostitution: "If we find a locality, the people having plain habits, prostitution unknown, and marriage honored, in what relation shall these institutions stand to each other? Or, observing city life, how far can we look upon prostitution as a bulwark protecting the sanctity of marriage, when we positively know that illegitimate sexual intercourse attracts and ruins in every way men in general, and especially the heads and supports of families? The plain, average woman has a clearer judgment upon this question than, for example, the fashionable society woman, for she knows that as a consequence of prostitution she runs the risk of getting a husband whose purity has been polluted, health undermined, morals lax, whose fidelity cannot be trusted, whose illusions are gone, whose love has been robbed of its youthful bloom, and last, but not least, she is exposed to the terrible danger of bearing diseased children, or those in whom the excessive sexual passion is inborn, inbred. The

* Lecky's opinion as to the value of prostitution is alluded to by Grant Allen in the concluding lines of his brief poem, "Sunday Night at Mabille, Second Empire," a poem which vividly pictures the wretchedness and ruin of prostitutes:

"Why have I brought you then to see Mabille
This Sunday night? you ask.—To find my text
And point my sermon. Here you have its gist:
—You tell me we must shut our eyes to all
That turns this gaudy Mabille to a hell,
If we would keep our wives and daughters pure.
So be it: I know not. But if we must hold
So many hearts in anguish and despair,
So many lives that once were blithe and free
In tenfold slavery, to guard the rest
From slight taint of ill; then, staring round
At all the hapless forms that crowd Mabille,
And knowing all that we have seen and said,
And feeling all this life in need of change,
One question ever rises to my lips,
One question that I scarcely dare to breathe—
If woman's virtue cost so much to keep,
Good friend, is woman's virtue worth the price?"

† *Westminster Review*, November, 1888.

* "Clinical Lectures and Essays."
† "Hygiene de l'Amour."
‡ "Deontologia."

mother knows that prostitution is a constant danger for growing sons, and threatens the worst disappointments and sufferings for their daughters when they marry. Indeed, I cannot see that we owe anything to prostitution. Is the sexual intercourse simply animal, without personal love, and robbed of family ties and natural responsibility, he soon becomes unsatisfied with common means, and extraordinary excitements are necessary, and thus the *blasé* requires something new, and even little girls may become his victims." "I have never looked upon prostitution for one moment as a necessity or a good, or as a protection of domestic virtue; the more it develops the more it harms married life, the protection of humanity."

Let me reinforce these words of Ribbing by the opinions of Dr. Samuel Johnson. When Boswell said to the latter, "So, then, sir, you would allow no irregular intercourse between the sexes?" Johnson's reply was: "To be sure I would not, sir. I would punish it more than is done, and so restrain it. In all countries there has been fornication, as in all countries there has been theft; but there may be more or less of one as of the other, in proportion to the force of the law. All men will naturally commit fornication as all men will naturally steal. And, sir, it is very absurd to argue, as has been often done, that prostitution is necessary to prevent the violent effects of appetite from violating the decent order of life, nay, should be permitted in order to preserve the chastity of our wives and daughters. Depend upon it, sir, severe laws, steadily enforced, would be sufficient against those evils, and promote marriage."

Of course, the essential causes of prostitution are the uncontrolled passion of men and the poverty of women.* But these are assisted greatly by the judgment of society, which regards a man's lapse from virtue as venial, while, if a woman falls, she becomes a pariah, an outcast. Sir Herbert Maxwell remarks† that "from the day a boy goes to school he is aware of the existence of a certain kind of evil of which a girl never suspects the existence until she has grown up. The boy knows it is evil, but in the eyes of the world there is no disgrace in yielding to it, and public opinion condones it. Unless he is of peculiar constitution it occupies a great deal of his thoughts." The writer further states that this is the most important circumstance in modern society which "completely severs the outset in life, and separates the tone of mind in the two sexes." While conceding the truth in chief of these statements, we can hardly believe young girls are quite as ignorant of sexual irregularities on the part of men, for even if female servants give them no information, the daily paper often does—indeed, sometimes a popular newspaper has thinly disguised advertisements telling where prostitutes are found. Is it right that there should be the barrier referred to between the sexes? Man's want of chastity has erected it, and man's restoration to purity must cast it down.

Why should there be two standards of morality in this matter, one for men and the other for women? "If chastity is a law for women, it must be a law for every woman; and if it is a law for every woman, it follows, necessarily, it must be for every man." A man, when he marries, desires first and exclusive possession; he does not select his bride from among prostitutes. But has he any right to demand a purity on the part of that bride which he cannot give? Women are themselves chiefly to blame when they marry profligates and debauchees. But the guilt belongs also to society, which so kindly condones the offenses of such men, receives them with open arms into its charmed circle, when it would be horrified to look upon the female companions of these men in orgies of lust—nay, a poor Magdalene turning her back upon her infamous life, and trying to make an honest support, could not have a menial's place in the kitchen!

Wise opinions and judicious counsels on your part may do much to lessen this great evil of the ages, while your own lives of continence will give additional strength to your efforts in accomplishing this end. In Wagner's "Parsifal" the story is told of a king who is suffering from a wound the efforts to heal which have been vain; but promise is made that the wound can be healed by "a pure being whose simple soul has been rendered knowing through pity." *Parsifal*, who

* What would you think of the employment agent of a store making the infamous suggestion to a young lady who remonstrates against the small compensation offered for her services, truly saying she could not live on it: "You might get a friend to pay your boarding?"

† "The Conduct of Friendship," *Nineteenth Century*, 1893.

has been tried, but successfully resisted sensual enticement, tearing himself from the embrace of the temptress *Kundry*, comes to the king who has heard the prophecy—

> "In the loving soul of a guileless one
> Put thy faith; him have I chosen."

The wound is healed. Are there no Parsifals here who may help bring blessed healing to this sorest wound of society?

I know that many of you will be tempted to evil, and I fear some may fall, and therefore I urge most earnestly such arguments as I can against this black vice. Prostitution more than brutalizes women; it is a market of human flesh and blood, yea of human life, for disease and premature death are almost inevitable to prostitutes. The law of Sperck is that the prostitute is attacked with syphilis in from one to three years after she begins her wretched trade. She perpetuates gonorrhœa and syphilis. She is doomed to jail, or hospital, or the grave, after a brief career. Yet the accursed trade is licensed in many countries, and some would have it licensed here. A distinguished French author,* referring to the licensing which exists in his country, observes that he is "convinced these regulations are without utility, both in regard to health and morals, and that they will always remain insufficient, no matter how severe." Think of France with its natality scarcely more than its mortality, and three millions of its thirty-six millions of inhabitants bastards, when even the suggestion of adopting the license system is made. Prostitution necessary? In Paris, and doubtless everywhere else, the prostitute's most lucrative time is just after workmen and laborers are paid. Pecuniary restraint proves moral restraint—the need ceases if there is no money. Whenever hard times come prostitutes complain that their business is poor. If poverty makes men even temporarily virtuous, might not the absence of temptation, and a healthy public sentiment, be equally potent, and permanently potent?

Is it not loathsome to think of one of these poor creatures,† living upon the lust of men, submitting to the embraces of half a dozen or more in a single night—as fast as the supposed "excremential need" of one is satisfied, starting out with freshly painted cheeks and perfumed handkerchief, to find some new sufferer from tumid testicles, plethoric purse and lecherous lunacy? Prostitution is a horrible trade, it is a fruitful source of disease, a hot-bed of venereal affections, and sinks all participants in lower depths of degradation.

The certificates from doctors, whether appointed by government, or volunteers, who for paltry pay open wider the doors of illegitimate indulgence by taking away, or lessening the fear of infection, are often, usually indeed, not worth the paper upon which they are written, as securing probable immunity from disease.

In Berlin there are eight thousand licensed prostitutes and thirty thousand clandestine ones. I recently asked a medical acquaintance in that city whose practice is largely in venereal diseases, by which class his male patients were more frequently infected, and his reply was by the former.*

Lord Bacon said: "Nuptial love maketh mankind; friendly love perfecteth it; but wanton love embaseth it." There can be only evil from prostitution. I read in a medical journal some time ago, a quasi-justification of the wickedness upon the ground that prostitutes were deficient in cerebral development. The rape of an idiot does not make a man nobler.

Prostitution prevents the normal growth of population, for it sterilizes thousands and tens of thousands of women who are its victims; it delays or prevents marriages, and when men who have been engaged in debauchery turn from their dissolute life and marry, they may carry disease to the nuptial couch, so that their wives are sterile or give birth to syphilitic children.

How can the former companion of prostitutes have a true conception of a pure, virtuous woman, and know the ideal of loving, sacrificing womanhood? He must

* Thulie: "La Femme."

† "How miserable is the condition of a courtesan whose business it is to soothe, suffer and obey the dictates of rage, insolence and lust."—Smollett in "Roderick Random." For a few years I have been greatly interested, and participated in what is known as "Rescue Work" in Philadelphia, and my pen is powerless to picture the horrors and loathsomeness of prostitution, as I know it from personal observation, and the histories given me by some of its unhappy victims.

* Possibly licensed prostitutes are more sought after, have a larger number of visitors, because of the fancied security from becoming infected furnished by authorized professional examinations, and hence are more liable to disease. Or, possibly, the experience was exceptional, quite accidental. But this one thing is evident, on account of it I have quoted the statement, the examination by police surgeons in Berlin fails to secure to those who visit licensed prostitutes immunity from venereal disease.

fail in what De Quincey has given as the true criterion of manhood, "the reverential feeling sometimes suddenly developed toward woman, and the ideal of woman. From that moment when women cease to be regarded with indifference, and when the ideal of womanhood, in its total pomp of loveliness and purity, dawns like some vast aurora upon the mind, boyhood has ended, childish thoughts and inclinations have passed away forever, and the gravity of manhood, with the self-respecting views of manhood, have commenced."

It is a dangerous and utterly false notion that a young man may sow wild oats, and not be compelled to garner the product of his sowing. It is forever true, certain as God's law, fixed as God's throne, whatsoever a man soweth, that shall he reap.

But some one may say, I do not propose to lead a dissolute life, and a single indulgence is not a matter of any consequence.

Only once! That single offense may bring you the curse of foul disease, while another escapes after a hundred transgressions. Only once! Will it be but once? Recall the wild bird that has just had its freedom restored, attempt by kind caresses and winning words to restrain the fierce passion of the tiger that has tasted human blood. As of old, *Facilis descensus Averni.* The first step in the downward road makes the next much easier—the very fact of yielding once weakens moral power, and the second surrender is more probable than the first, and thus on and on, and who can tell where or when the series will end? Only once! A single trial of the force of Niagara's current may sweep you to swift death. Only once! You are spending your summer at the seashore, and are told of the terrible under-tow at some bathing-places, and are warned; but you would just once find out for yourself how strong this secret, subtle power of the sea is, and possibly not until that sea gives up her dead will your burial place be known. You are ascending the Alps, and have come to a dangerous and difficult pass, on the one side a profound abyss, on the other a perpendicular wall of rock or of ice, the path too narrow for turning, too slippery for any but a firm and cautious foot; only once, you say, let me pause to pluck a flower at the edge of the path—the flower is won, but you perish.

Let us cast aside these arguments and admit that there is but one sin and no plain evil from it. But has it caused no hidden and lasting injury? Few in adult life who do not have upon fingers or hands the scars of wounds received in childhood by the careless use of knife or hatchet; the wound healed kindly, but the record, it may be only a faint white line, abides, and there it is until your body and members are dust and ashes: the scar disappear!

> "Never, though your mortal summers to such length of years should come
> As the many-wintered crow that calls the clanging rookery home."

May there not be scars upon the soul more lasting even than those of the body? No wrong act can be done by man or woman that is not an injury to the actor, and that does not carry with it a penalty. In this world's economy wages are not paid every Saturday night. The memory of an evil deed and its marring cannot pass away. The flood of penitential tears cannot wash away the record, the damned spot will not out. A Swedish writer has said that society is a ship, there is a corpse in the hold and that corpse is prostitution, it cannot be thrown overboard. Every violation of virtue, every sacrifice of chastity is a corpse, and the transgressor cannot throw it overboard.

In one of Robert Browning's shorter poems he speaks of the Morgue at Paris, and the poor victims of suicide taken from the Seine exhibited for recognition, lying extended each upon a copper table; in regard to one he says:

> "Oh, women were the prize for you!
> Money gets women, cards and dice
> Get money, and ill-luck gets just
> The copper couch and one clear nice
> Cool squirt of water o'er your bust,
> The right thing to extinguish lust."

Suicide the end of lust! Do medical students ever thus perish? There stand vividly before me now two students to whom I lectured; one, thirty years ago, committed suicide because of departure from virtue. He had both wife and children. In an evil hour he went to a house of prostitution, was infected with syphilis, and a few days afterward, about the time he should have returned home at the close of the session, took a fatal dose of poison. The other referred to I knew very well and thought him safe from temptation, he was so amiable and gentle

and apparently steadfast in virtue. He graduated, had hospital experience, entered upon practice and succeeded. But unfortunately he had become infatuated with a prostitute in his hospital life and soon financial ruin came; he died by his own hand. With these facts vivid in my memory, do you wonder that I press the question of personal purity upon you so earnestly? These dead men are speaking to you by me.

How are you to be saved from immediate and imminent perils? First, abstain from alcoholic liquors. Sometimes it is true they make men "wanton as a satyr and impotent as age." But let me narrate the following incident that occurred to me more than forty years ago, as showing how intoxication may lead to lustful indulgence: One day a gentleman who had been a college friend for a year—he was much older than I and graduated three years earlier—stated that he had just returned from New York, and while there dined, together with several others, with Captain ——, commander of one of our war vessels, who had made himself famous by bombarding a foreign seaport in vindication of our country's rights, but I shall mention neither the name of the vessel nor of the captain. My friend said: "After we had been drinking wine very freely one of the company proposed that we should visit a house of prostitution; about half the number went, I among them. I certainly would not have gone if I had not been drinking. I am afraid I have syphilis." Upon examination I found he had nothing but an eruption of herpes upon the glans which would be cured in a few days. His mind was greatly relieved, especially as he had a wife.

You will frequently find in your professional experience the story of my friend repeated; that is, men will explain exposure to venereal disease by their being drunk. What relation does alcohol bear to lust? In moderate quantities the former may excite the latter, but chiefly alcohol blunts the moral sensibility, hushes the voice of conscience, and thus conduces to crime. Let the young man beware of intoxicating drinks, if for no other reason than by abstaining from them the temptation to unchaste conduct is lessened.

Further, let him beware of novels, plays, pictures that invite sensual feelings, or thoughts, and above all, of the images of lust which an idle mind is in such danger of conceiving—avoid every object or thought that may excite sensual desires. He needs especially to remember the Divine command, "Keep thy heart with all diligence, for out of it are the issues of life;" there are no words of sage or philosopher comparable to these in value. As you ascend the Rhine by steamer, possibly about half way between Mayence and Cologne, there is seen on the right a steeply rising hill on which, and in the waters at its base, there once lived a water-nymph of enchanting beauty and song, Lorelei; the young man who, intoxicated by her beauty and the music, sought near approach to the charmer, perished in the treacherous waters. There are Loreleis elsewhere than on the Rhine, and the lesson is essentially the same.

Let us find counsel in the conduct of Ulysses when exposed to the temptations of the Sirens. Listen to the story as told in Bryant's translation of the Odyssey. Ulysses, with his companions freed from the power of Circe, is about starting home, where the faithful Penelope, model of wifely love and patient sacrifice, has waited his return for near a score of years. Circe instructs him as to the perils to which he will be exposed in his homeward journey, and the means of avoiding, or of overcoming, thus referring to the Sirens:

"Thou first will come
To where the Sirens haunt. They throw a spell
O'er all who pass that way. If unawares
One finds himself so nigh that he can hear
Their voices, round him nevermore shall wife
And lisping children gather, welcoming
His safe return with joy. The Sirens sit
In a green field, and charm with mellow notes
The comer, while beside them lie in heaps
The bones of men decaying underneath
The shr veled skins. Take heed and pass them by.
First fill with wax well kneaded in th e palm
The ears of thy companions, that no sound
May enter. Hear the music, if thou wilt,
But let thy people bind thee, hand and foot,
To the good ship, upright to the mast,
Let them be charged to bind thee yet more fast
With added bands."

Let your ears be deaf to the music that lures to destruction, your eyes be blind to the beauty or Lorelei or Siren, and duty, purity, and love make a triple cord, not easily broken, defying the strong wave of temptation, and unconsumed by the fire of lust.

Let me counsel you with some of the words used by Ruskin to a young man, one of his students: "No reasoning or

resolution will stand. To turn away the eyes and thoughts is the only way. If you have not hitherto been enabled to do this, you will find in perfect chastity of thought and body, there is indeed a strange power, rendering every act of the soul more healthy and spiritual, and giving a strength that is otherwise unattainable."

Nay, more, I would quote another great English author, Dr. Samuel Johnson, and his words refer not only to the special topic before us, but also to the control of all inordinate desires: "To deny early and inflexibly, is the only art of checking the importunity of desire, and of preserving quiet and innocence. Innocent gratifications must be sometimes withheld; he that complies with all lawful desires will certainly lose his empire over himself, and in time either submit his reason to his wishes, and think all his desires are lawful, or dismiss his reason as troublesome and intrusive, and resolve to snatch what he may happen to wish, without inquiring about right and wrong." "No man whose appetites are his masters, can perform the duties of his nature with strictness and regularity; he that would be superior to external influences must first become superior to his own passions."

Walter Scott thus speaks, in the introduction to "Guy Mannering:" "He suffers from the awakening of those harpies, the passions, which have slept with him as with others, till the period of life which he has now attained. Better, far better that they torment him by ungrateful cravings, than that he should have to repent having satisfied them by criminal indulgence."

What more shall I say? What stronger plea can I make? By the honor you bear your father, or his memory; by the love of your mother, the purity of her womanhood, and by her blessed prayers which are hanging like good angels over your head; by a sister's farewell kiss, never let your lips be polluted with a courtesan's caresses, but make chastity the law of your life. Nay more. In the name and behalf of her who some day shall be nearer and dearer than father, or mother, or sister, I beseech you remember the words of King Arthur in Tennyson:

> "To lead sweet lives in purest chastity,
> To love one maiden only, cleave to her,
> And worship her by years of noble deeds,
> Until they won her; for indeed I knew
> Of no more subtle master under heaven
> Than is the maiden passion for a maid,
> Not only to keep down the base in man,
> But teach high thoughts, and amiable words,
> And courtliness, and the desire of fame,
> And love of truth, and all that makes a man."

CONTUSION OF THE BRAIN.

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The brain, the seat of the mind, is that portion of the cerebro-spinal axis contained within the cranial cavity and firmly environed by several bones of the skull.

It is composed of a white, soft substance divided into different compartments and processes, the whole being enveloped and protected by the three membranes, pia mater, arachnoid, and dura mater.

Situated at the upper extremity of the body and inclosed in a bony cavity, it is the seat of the high mental faculties which distinguish man as a rational and intelligent being; yet it, like other parts of the human body, is subject to injuries from external violence.

The injuries of the brain are usually recognized as compression, concussion, and contusion and laceration.

Contusion of the brain is the particular lesion which I desire to briefly consider. Concussion and compression of the brain are injuries that are distinct in their symptoms and generally easily recognized (though not always clearly differentiated) and are clearly and fully described in our text-books. But contusion, although a special injury distinct and separate from compression and concussion, is not always recognized, nor is it clearly and definitely treated of in our literature and text-books. Yet that such a condition does occur as a distinct pathological lesion giving rise to a particular train of symptoms is demonstrated by post-mortem examinations and clinical observations.

In a somewhat limited clinical experience I have had opportunity of observing

a train of symptoms following injuries of the head which fully conformed to those of contusion of the brain as described by the few authors who have written about this lesion.

Contusion of the brain is defined to be a sudden and violent attrition of a portion of its substance, attended with more or less laceration and an effusion of blood, generally in the form of minute specks or little clots; a sudden and violent shaking up of the brain, with a bruising of its tissues and laceration of the minute blood-vessels. In a few words, it is a bruising of the brain which (as in other parts) is followed by a certain train of symptoms indicative of the particular pathological lesions.

The most usual seat of the injury is about the base of the brain, most frequently in the cerebrum and on its under surface. The cerebellum, pons, crura, and medulla are sometimes contused, though rarely.

The extent of the injury varies, from a small patch so minute, perhaps, as to make no impression upon the individual while living, and scarcely to be recognized after death, to a contusion so extensive as to involve the greater part of an entire lobe or even one of the hemispheres. Contusion of the brain occurs sometimes with a fracture of the skull, and is then apt to be severe, and especially is this the case when the fracture is situated at the base of the brain from force applied to the vertex, as falls upon the head. Occasionally the force is so great that a contusion is produced in different parts of the brain remote from each other.

The cause of contusion of the brain is always external violence, either directly or indirectly applied. In severe cases the lesion is usually produced by direct violence, while the milder cases are the result of indirect violence. Sometimes, however, though rarely, a severe contusion may be the result of indirect violence. Contusion of the brain occurs in two different forms, the circumscribed and the diffused.

In the circumscribed variety the injury is limited to a small portion of the brain and is confined to the gray substance.

The amount of the injury to the brain varies in degree and extent. In the milder cases of these injuries the contusion is of small area. At the seat of the injury there is a discoloration of the brain tissue; it presents a dark purplish hue and is covered with very small spots of extravasated blood (perhaps not larger than a pin's point) closely grouped together, the dark color gradually fading from the center to the circumference as the points of diffused blood become less frequent. These patches are not easily washed away, and retain their color and consistency even under rough handling.

In more severe cases the central parts of the bruised portions, thoroughly infiltrated with blood, are of a uniform dark purplish color, which extend some distance both into the gray and white substances; imbedded in this part are little clots of blood of the size of peas and around the circumference and in the deeper parts are specks of extravasation scattered more and more widely until they gradually disappear. The brain substance, torn, broken up, and shreddy, readily gives way under a gentle stream of water, which, while gradually loosening the clots of blood, carries them away, leaving little pits with irregular and shaggy margins and thickly studded throughout with pin-point extravasations.

In contusion of the brain the membranes are also involved to a greater or less extent. In the mild cases the pia mater only is injured. In the severe cases the investing membrane as well as the pia mater is torn and there is an extravasation of blood in the cavity of the arachnoid. In the diffused variety there is a general contusion of the brain; the extravasation of blood is more generally scattered throughout the brain, on the surface as well as in the interior.

Circumscribed contusion is of more frequent occurrence than the diffused variety. Contusion of the brain may take place at the point where the blow is received, or it may be far away, at a part distant from the seat of the external wound; on the opposite side of the brain, by *contre-coup*, "the wave in the cerebro-spinal fluid created by a blow produces what is often its maximum effect on the opposite side of the skull from the point struck, tearing the vessels of the pia mater and cortex."

All parts of the brain are not alike subject to contusion, the lesion occurring in some parts more frequently than in others.

The base of the brain is most frequently

the seat of the contusion, the upper part very seldom. The middle lobes are most frequently injured, the anterior next and the posterior very seldom.

This is explained by the fact that the posterior lobes lie upon a soft cushion, the tentorium cerebelli, but the anterior and the middle lobes are in contact with irregular and angular projections of bones, which, although rounded off to a certain extent and smoothed down by the dura mater, are still both sharp and numerous.

The cause of contusion of the brain, as already stated, is external violence upon the head, especially with a blunt-pointed instrument. It is the result of a concentration of force applied to one particular part. The skull need not be fractured, and, as a fact, in a majority of cases there is no fracture. Occasionally the contusion is the result of violence indirectly applied to the brain, as from falls upon the feet, etc.

The symptoms of contusion of the brain are always meager, often obscure, so much so that the nature of the injury is frequently overlooked, necessarily so from the fact that contusion is nearly always associated with concussion of the brain, and the symptoms of each lesion are so mingled and coupled together that the diagnosis is uncertain, often impossible for the first few days of the injury. Again, contusion in some cases is complicated with fracture of the skull, and then compression of the brain masks the symptoms of contusion.

Ordinarily, the particular train of symptoms which indicates contusion of the brain is: persistence of unconsciousness, stupor without stertorous breathing. In milder cases there is a contraction of the pupils of one or both eyes (usually only one), contraction of one of the lids, convulsive movements of one or more of the muscles of the face, especially about the lips; difficult pronunciation, loss of expression, a vacant stare. In addition to these symptoms, in the severer cases there will be tonic spasms of the limbs, restlessness and extreme agitation, constant rolling and tumbling in bed, unconsciousness, partial or complete; rigid contraction of one or more of the limbs, especially the fingers; drowsiness and more or less delirium.

In the slight cases the symptoms will be less marked and evanescent, the brain in a short time accommodating itself to the injury. The decubitus is decidedly symptomatic, the patient almost invariably lying upon one side with the limbs drawn up; there is a general flexion of the limbs. The limbs are flexed, and if straightened out are immediately drawn up.

In some cases there is a relaxation of the sphincters, the urine and feces passing involuntarily; in one case there was retention of the urine. There will be pain in the head (generally constant) with a partial paralysis of some of the facial muscles, impaired vision, twitching of the muscles of the face, defective sensation with mental hebetude.

The diagnosis in well-marked cases will not be difficult: the persistence of stupor, the absence of stertor, the great restlessness, the peculiar decubitus, the impaired mental action, together with severe pains in the lower limbs, point clearly to the nature of the disease.

But in mild cases these symptoms are insignificant, and often many of them are entirely absent. When contusion is complicated with compression of the brain we have no means of estimating the extent of each lesion nor of differentiating them.

The prognosis in contusion of the brain is dependent to a great extent upon the character and condition of the patient, the amount of violence used in producing the injury, the extent of the lesion, and the existing complications. In slight contusion of the brain of the young and healthy, uncomplicated, the prognosis is very favorable; the effused blood is readily absorbed and the injury of the brain tissue repaired. In the aged and cases where the injury is great and the contusion extensive, the prognosis is unfavorable. Contusion of the brain is a very dangerous condition, oftentimes attended with fatal results; but it is not always fatal—oftentimes the patient recovers. But when the contusion is very great the worst consequences are to be feared; death may result soon after the reception of the injury, from structural lesion of the cerebral tissue, or occurring later, may be caused by inflammation of the brain and its enveloping membrane.

The course of the pathological changes consequent upon the injury is usually prolonged for several days. The active symptoms may continue for weeks or more when, in favorable cases, there is a gradual return of the mental faculties and a

subsidence of the graver symptoms, yet for many weeks the effect of the injury is felt by the patient. He suffers with severe and frequent-recurring headaches, indifference, with an indisposition to make any mental effort.

The results of the injury are pains in the lower limbs, especially about the knees, peevish disposition, mental hebetude and cerebral irritation.

The treatment of the contusion is one of expectancy more than of active medication. There is always more or less shock, and the first indication is to secure a gradual reaction. The patient should be placed in a recumbent position, ample ventilation secured, and utmost quietude enjoined; artificial heat to the extremities and diffusible stimulants administered, hypodermatically if need be.

After reaction from the shock it is absolutely necessary to keep the patient perfectly quiet and at complete rest. The excessive restlessness must be controlled by anodynes, and the best of these is morphine hypodermatically administered. No fear need be felt of increasing the tendency to inflammatory action by the use of morphine. The obtunding of the sensitiveness of the nerve centers by morphine rather retards than excites inflammation. An active cathartic should be given soon after the injury; subsequently the bowels should be moved by an enema; while the diet should be light yet nutritious.

The principle of treatment is to place the patient in the best condition for the gradual restoration of the brain to the performance of its normal functions. And we can only do this by securing quietude and rest, maintaining the natural functions of the body and waiting the results, in the mean time warding off any threatened danger by appropriate remedies. Should inflammation occur it must be controlled by arterial sedatives, blood-letting (when admissible), aconite, veratrum viride and the local application of cold. The bichloride of mercury and the iodide of potassium should be given to cause the absorption of the cerebral effusion. Should the inflammation be localized and abscess result, the proper remedy would be to open the skull and evacuate the pus. The less dangerous symptoms are to be treated by the same watchful care, perfect rest, and the avoiding of any mental excitement.

COMMUNICATIONS.

FOUR ABDOMINAL SECTIONS FOR PELVIC AILMENTS.*

I. N. BRAINERD, M.D., Alma, Mich.

It is quite the custom to report cœliotomies made for ailments in the female pelvis in the section on gynæcology; but we are surgeons and the whole field is ours. If we relinquish the pelvis to the gynæcologist, the eye to the oculist, the ear to the aurist, the rectum to the "orificial surgeon," the genitals and bladder to the genito-urinary surgeon, the feet and legs to the orthopœdic surgeon, and the toes to the chiropodist, we shall soon have but an empty name.

Since our last meeting I have made four abdominal sections for ailments occurring in the pelvis of the female, as follow:

Case I.—Mrs. F., of E., Mich., aged about twenty-five. This patient had a miscarriage at eight months. Nothing threatening occurred for the first week or ten days. Then a fever reaching 105° F. developed, accompanied by rigors and other signs of sepsis. A consultant was called, who diagnosed ague. Five weeks after confinement I was called to see her. She was very low; unconscious most of the time; pulse rapid and feeble; greatly emaciated, having rigors about every four hours; was tender in the groins and in the vault of the vagina; was tympanitic and had that smoky-yellow hue so common in septicæmia. At this time the temperature was but little elevated. I diagnosed sepsis from salpingitis and pelvic peritonitis. After I had been there a short time, she roused up sufficiently to know that I was there and desired me to see her back. It was literally covered with syphilitic ulcers.

* Trans. Michigan State Medical Society, 1894.

The attending physician, whose name I am compelled to suppress to keep secret the name and address of the patient, and I then withdrew for private consultation. Several questions confronted us. The first one was ethical. The husband had married this woman less than two months before upon the supposition that he was the father of the unborn child. His utmost acquaintance with the woman had been but five months. The child proved to be an eight-months fœtus. This was the man's first pain. Now we questioned as to whether we should inform him that his wife was also syphilitic and run the further risk of raising a domestic tempest. We decided to tell him for his own protection and because it cut some figure in the prognosis.

The next question related to the advisability of an operation. She was profoundly septic, and during that day had been unconscious about half of the time. Almost nothing could be hoped for, and yet that was the only thing that offered any hope. Without the operation she must die within a day or two. I believed that the tubal trouble was subsiding and that the sepsis arose from the absorption of soiled serum in the peritoneal cavity. The attending physician had reached this conclusion before. We therefore decided to advise a section to irrigate the peritoneal cavity. We first admonished the husband of all the dangers of the operation and told him that there was but shadowy hope that it would do any good. We also advised him to consult the girl's parents, who lived but a few miles away. He did so, and the next morning reported their acquiescence.

The patient was still more feeble this morning and had been unconscious since midnight. The husband wishing the operation, however, hurried preparations were made and the operation was done. The patient had been moribund for two hours. She needed no chloroform. Her pulse was so weak we injected strychnia in aromatic ammonia. When the incision was made bloody and stinking serum boiled out. Copious douching with aseptic hot water cleansed the cavity. The patient was quickly bandaged and put to bed in better condition than she was in when she was put upon the table. There was no shock. The pulse and respiration were good for about two hours, when both rapidly failed and the patient died.

This operation would not have been undertaken at all except for the fact that sometimes a patient moribund from sepsis does revive after removing the cause.

Case II.—Mrs. W., Alma, Mich., aged thirty six; my patient. For several years this lady had been an invalid and had often suffered exacerbations of pain accompanied by hysterical manifestations. About a year before the date of the operation the patient came into my hands, though I had known of the case for several years before. She then had a retroversion, with great tenderness in the region of each ovary. I replaced the uterus and put in a Smith's pessary. I suggested an oöphorectomy at that time, but the pessary did so much good that nothing further was done about it. She wore the pessary half a year, when it was removed. In another half-year another paroxysm of suffering came on, soon after a fall from the doorsteps. I replaced the pessary. After a fortnight I had to remove it because it caused so much pain. I simply removed it, but made no exploration. The patient continued suffering almost intolerable pain, until I was called to replace the pessary, because the patient suffered more now than before. This time I explored the vault of the vagina. And now, besides the ovaritis, there was a prolapsed ovary (right), and so tender that I could do nothing without chloroform. I again advised an oöphorectomy. The next morning they engaged to have it done, and the next morning thereafter it was done.

In making the incision, when I came upon what I supposed to be the peritoneum, I cautiously picked it up and cut through it. Then I came into a layer of vascular fat, and concluded that that shiny membrane was not the peritoneum. Soon I came upon another serous membrane. I cut into this and found it very thick. I kept cutting cautiously, when suddenly I found that I had "cut a gut." I had made a hole an inch long into the bowel. Now it was all plain. That first shiny membrane was the peritoneum. The layer of fat was the omentum. The next shiny membrane was the inner side of the omentum and the gut, all grown together by inflammatory adhesion. I sewed up the enterectomy with two rows of Lembert sutures, then peeled off the omentum downward for two inches, when I came into the peritoneal cavity. The wounded gut was carefully held out of the way all

the time. It was quite difficult to get up the ovaries, because of the adhesions. Both were cystic, one being nested with a score of cysts from one-sixteenth of an inch to one inch in diameter. The other contained an apoplectic clot.

This patient had vomited a great deal before the operation, and this was the greatest difficulty afterward for two or three days. Aside from this the recovery was uneventful. The temperature never touched 100° F. but twice, and then just before defecation. The wound in the gut never gave any trouble. The patient has been perfectly comfortable ever since. She now does her own work, including washing, ironing and dressmaking, and is so fat that she can hardly get into her former clothes.

I must say that I was surprised at the condition of this woman's abdominal and pelvic viscera. I did not dream that she was so great a sufferer as the operation disclosed. Because of her hysterical conduct I had but little sympathy for her. The only friend that was left her was that good old mother of hers. She was always faithful and sympathetic.

CASE III.—Mrs. V., Clare, Mich., aged thirty-six. Upon this woman I did Tait's operation for the arrest of an uterine fibroid. The recovery was rapid and uneventful, except the formation of a mural abscess. On the eleventh day the patient sat up, on the twelfth day she was around the house, and on the thirteenth day she rode thirty-five miles by rail to her home. She is doing almost a man's work. I have both her ovaries and both her tubes in a bottle; yet this woman is menstruating every twenty-eight days.

CASE IV.—Mrs. W., Holly, Mich., aged about thirty. This woman was first troubled with vomiting of pregnancy. If I am correctly informed by the patient, the vomiting was never extreme and never indicated an abortion; yet this was the first and persistent advice of her physician. At last she unwillingly consented to it. The abortion was induced and salpingitis followed. As I had formerly been their medical adviser, they wrote to me about the case. I shall not detail the symptoms as they gave them to me, but simply say that I diagnosed salpingitis and tentatively advised an operation. They wrote to me to come and do the operation. I went. The attending physician did not agree with me as to the need of an operation. We fooled away the day as they do in Congress, and I went home. In a few days they sent for me again, but I found the patient so much improved that I believed she would get along without an operation. Soon she got worse and they sent for me again. I took Dr. Day, from Bannister, with me and operated.

This proved to be the worst case I had ever seen. Two knuckles of small gut were adherent to the uterus. The cæcum and appendix were adherent to the right tube and broad ligament, making it impossible to get up the tube. I could not even get it into the wound for drainage, so I pushed the uterus down into the pelvis with one hand and pushed a finger of the other hand into the uterus, and manipulated the tube until the contents came through that way. Then I sewed up the wound and wished for much, but hoped for but little.

The tube continued to discharge for some days and gave no great trouble for three months, when the patient wrote to me saying that it was paining her again. That has since subsided and the patient is now doing her work.

In the course of her convalescence the patient was attacked with a severe ophthalmia with blepharospasm and supraorbital neuralgia. I believe that this, as well as the salpingitis, was a resultant of the ill-starred abortion.

If it be asked why I did not attempt to drain the pus-tube through the vault of the vagina after failing to get it up into the abdominal wound, or why I did not aspirate through the ventral wound, then incise and stuff with iodoform gauze, all I have to say is, I succeeded in draining by the natural way and escaped the danger of soiling the peritoneum from above and of puncturing the gut from below.

These four operations were done for causes as follow: The first one was for peritonitis; the second for diseased ovaries; the third to arrest the growth of an uterine fibroid; the fourth for pyosalpinx. I want to say that I believe that sections for salpingitis should be done more frequently than they are. Within two years I have seen two women die from salpingitis: one following labor and one whom, for charity's sake, we'll presume to have been a virgin. I saw another come very near death from an abortion, and know of another who has been laid up with it for five months and is now at death's door. These

cases were all in other towns. In the first case an operation was refused; in the second case no operation was advised because the patient was so nearly dead; in the third curetting was done because the endometritis was the worst feature; in the fourth case the patient still declines an operation, preferring to die with a putrid tube than to live without any. Her wishes will probably be gratified.

TRANSLATIONS.

THERAPEUTICAL SUGGESTIONS FROM FOREIGN JOURNALS.*

COAL TAR IN CERTAIN SKIN DISEASES.

Dr. L. Leistikow (*La Semaine Medicale*, No. 59, 1894) claims that coal has the advantage over wood tar, oil of cade, etc., of being more powerful and having a more lasting action in pruritus and other itching affections. It is an excellent remedy in dry eczemas of the hairy scalp, back of the neck, thorax, external genitals, abdomen and extremities, as well as in Hebra's prurigo, trichophytiasis and psoriasis, especially when the psoriatic plaques are situated upon the hairy scalp, elbows and knees. Yet as this drug might give rise to symptoms of poisoning if applied to vast surfaces, its use should preferably be limited to localized dermatoses. In certain generalized skin affections it may be of service in treating regions particularly affected. Finally, it should not be applied to the face nor in patients who cannot give up their occupations while under treatment, as it is liable to give rise, of itself, to intense erythema. He employs the following formula:

Coal tar	6	o	ʒiss
Alcohol (95 per cent.)	4	o	ʒj
Ether	2	o	gtts xxx

Apply locally by means of a camel's-hair brush. The tar may be easily removed by rubbing with olive oil.

STATIC ELECTRICITY IN VARICOSE CRURAL ULCERS.

Dr. L. Marquant (*Wiener Medizinische Presse*, No. 43, 1894), in a recent dissertation from the Lille Medical School, reports good results from the use of static electricity in the treatment of varicose crural ulcers. The ulcer is first washed with a weak solution of carbolic acid or sublimate and then covered with a thin layer of cotton. The patient is placed upon the isolating platform and connected with the negative pole of the static machine. The other pole is brought near to the ulcer, yet not so near as to produce sparks nor so distant as to give rise to the "electric wind." After the current has acted for ten minutes, the leg is dressed with a simple antiseptic dressing. This is renewed twice a week, while the electric sittings are given three times a week, so that once in the week the current acts through a dressing of three layers. The cases treated thus he divides into three groups. In the first he places those where the ulcer is the only symptom. In all of these cases the improvement was rapid and began almost immediately after commencing treatment, in that the itching and pain disappeared. The œdema and redness of the surrounding soft parts gradually decreased, the varicose dilatations disappeared and the ulcer cicatrized. In the second series of cases there was, besides the ulcer, a debilitating factor, as advanced age or a chronic disease. In these cases the improvement appeared late and after amelioration of the general condition. In those cases where the static current led to no improvement, all other means also failed.

EXTRACT OF THYROID GLANDS IN EXOPHTHALMIC GOITRE.

Dr. Jules Voisen (*La France Medicale*, No. 43, 1894) recently reported before the Hospital Society of Paris the case of a woman affected with Basedow's disease who received six to eight grams of extract of sheep's thyroids, to be taken in two doses daily, before each meal, in a little sauce. In fifteen days a notable improvement was noticed. The excessive irritability, trembling, insomnia and palpitation of the heart with a sense of suffocation were greatly improved, while the œdema

* In charge of the translator, F. H. Pritchard, A.M., M.D.

of the lower limbs had disappeared and her pulse rate had fallen to 100.

ETHER AS AN ANESTHETIC.

Prof. H. Fritsch (*Medicinische Neuigkeiten*, No. 39, 1894) would see ether occupy the place of chloroform in gynecological and obstetric practice. He believes the outlook better for anemic individuals in long-lasting operations with ether. In obstetrics, in forceps operations, version, Cæsarean section and whenever there is danger threatening the child, it is always to be preferred.

SULPHUR IN DIPHTHERIA.

Dr. A Forslund (*Revue Internationale de Medecin et de Chirurgie Pratiques*, No. 17, 1894), of Stockholm, claims that insufflations of sulphur are capable of destroying the toxines of diphtheria while they are limited to the pharynx and tonsils, thus preventing their entering the system and giving rise to general symptoms. The sulphur, he says, is insufflated until the false membranes are completely covered with the powder. It is allowed to remain there for from twenty to thirty minutes, after which it is irrigated off by water which has been boiled and allowed to cool. This local treatment is repeated two or three times a day, according to the requirements of the case. He believes it a specific in ulcers which are greenish, with a tinge of black and of a disagreeable odor—gangrenous variety. The burning pains are also quieted by the remedy. He rejects the mercurials and all methods whereby the mucous membrane is caused to bleed. A solution of the bicarbonate of soda (15 : 300) may be used as a gargle. Seventy-six cases have been cured by this method.

TREATMENT OF SMALL-POX BY EXCLUSION OF THE RED RAYS OF DAYLIGHT.

Dr. Henry Benckert (*Hygeia*, liv, 7, pp. 11–22, 1894) has treated seventeen cases of small-pox by exclusion of the red rays of daylight, a method which has been brought forward by Finsen, a Danish physician, and tried by a number of other observers, chiefly Scandinavians; of these seventeen cases five were varioloid. As a rule the secondary fever was not observed owing to the exclusion of the irritating chemical (red) rays of light. In one case there were a few very small cicatrices on the end of the nose and in another on the fingers. Desiccation set in more rapidly and the crusts detached earlier than usual. The varioloid forms were influenced a little, but to a less extent. The results of his experience would suggest its trial.

SAFE CHLOROFORM ANESTHESIA.

Drs. Langlois and Maurange (*Muenchener Medicinische Wochenschrift*, No. 43, 1894) have sought to obtain a variety of mixed anesthesia which would prevent cessation of the heart's action, the greatest danger of chloroform anesthesia. Physiological experiments have demonstrated sparteine to possess two marked actions, a strengthening influence upon the heart and an inhibitory one upon the pneumogastric. Clinically, their method is as follows: A half-hour before anesthetizing, one c.cm. of the following mixture is injected hypodermically:

Morphine muriate....	0	1	grs. jss
Sparteine sulphate	0	3–0.5	grs. ivss vijss
Distilled water, ad.....	10	0	ʒ ijss

One c.cm. of this solution will contain 0.01 of morphine and 0.03 of sparteine. In 148 operations with chloroform as an anesthetic and employment of this preparation, no disturbance of the heart was remarked, whatever the disease, the duration of the operation, the age of the patient or his previous disease—tuberculosis, hemorrhage, albuminuria, convalescence from typhoid fever, etc. In all cases anesthesia rapidly followed, but little chloroform was necessary and the pulse was full and regular during the entire operation. In a few cases where an operation of two hours and over was necessary, the respiration became somewhat feeble, yet the heart continued to beat with full force. In these cases rhythmic tractions of the tongue permitted a continuance of the operation.

THYROID FEEDING IN MYXŒDEMA.

Dr. J. J. Schmidt (*Deutsche Medicinische Wochenschrift*, No. 42, 1894) has obtained good results with thyroid feeding in a desperate case of myxœdema. He advises beginning with small doses, smaller than those usually given, until the cutaneous swelling begins to disappear. About one gram (grs. xv) a day will suffice and not expose the patient to danger, and may

be ordered instead of the usual tablet once a week. One of White's tablets may be also given daily, later two to three, for four or five weeks, with the same results as with feeding the fresh extract. With appearance of alarming symptoms, headache, vomiting and pain in the kidneys and increasing pulse rate, all forms of the extract should be discontinued at once. He regards a long-lasting treatment with careful watching of the patient as requisite for a definite cure.

PUERPERAL INTERMITTENT FEVER.

Dr. Solowieff (*Revista de Ciencias Medicas de Barcelona*, No. 18, 1894), from three cases of this rare complication of childbed and a study of the literature, concludes as follows:

1. Intermittent fever during pregnancy and childbed is a rare disease.
2. Diagnosis and treatment are necessary, as it may influence the mother and fœtus, causing either abortion or death of the fœtus.
3. In childbed it may prevent the secretion of milk and the involution of the uterus.
4. It is to be distinguished from other febrile affections of the puerperium, and especially puerperal septicemia.
5. The treatment is the same as in the non-pregnant, yet it is useful to combine quinine with opiates.
6. In nursing women with intermittent fever the tannate of quinine is indicated; opium, if used, will dry up the secretion of milk.
7. In asthenic parturient women small doses of arsenic are of service.

CORYL, A NEW LOCAL ANESTHETIC.

Dr. Gaubert (*Hospitals-Tidende*, No. 34, 1894), of Paris, has invented a new local anesthetic by mixing certain proportions of ethyl and methyl chloride. It is stated to act better than ethyl chloride, which in the mouth does not give as good results as in other portions of the body and in the molar teeth of the lower jaw, where its action is only to be obtained in two to three minutes, during which time it would be impossible to keep the saliva away from the gum, so that its action would be a failure. Methyl chloride acts much more rapidly than the ethyl compound; its boiling-point lies 22° below zero, while that of ethyl chloride is 10° above. Alone the methyl preparation has such a powerful freezing action as to cause necrosis of the tissues. Coryl is a mixture of the two with a boiling-point at zero; it is a colorless liquid of an ether-like odor and not easily inflammable. It is put up in steel tubes under a pressure of three atmospheres. Its action lasts from fifteen to twenty seconds.

TREATMENT OF FRECKLES AND CHLOASMA.

In the *Wiener Medizinische Presse*, No. 43, 1894, the following formulæ are advised in freckles:

Corrosive sublimate.....	0.25-1	o	grs. iv-xv
Colorless extr. hamamelis, Glycerine, Alcohol....	āā 50	o	ʒjss

To be applied locally morning and evening.

Less irritating is the following:

Muriate cocaine.....	1	o	grs. xv
Boric acid.....	15	o	ʒiv
Rectified alcohol.....	200	o	ʒvj ʒij

To be applied locally on compresses.

In chloasma the following is spoken highly of:

Corrosive sublimate.....	o	60	grs. ix
Muriate ammonia.....	4	o	ʒj
Rectified alcohol.....	50	o	ʒjss
Colorless extr. hamamelis	100	o	ʒij ʒj

To be applied locally on compresses.

All of these remedies are to be discontinued at once as soon as a pronounced irritation of the skin follows; this is best treated by an oxide of zinc salve. As soon as these symptoms of irritation disappear treatment may be begun again.

DANGERS OF BETA NAPHTHOL SALVE.

Dr. Baatz (*La Sémaine Médicale*, No. 59, 1894) warns against a possible danger in prescribing inunctions of a salve of beta naphthol. He treated two young children, of six and eight years respectively, with a salve of beta naphthol locally for the itch (two per cent.). The little patients were cured of their itch, but three weeks later they were seized with œdema of the lower limbs and albuminuria; one of the children died. The diagnosis was confirmed by the necropsy. None of these children had had symptoms of this disease before.

CORRESPONDENCE.

REPORT OF PARASITIC ENTOZOA ENCOUNTERED IN GENERAL PRACTICE IN TEXAS DURING OVER FORTY YEARS.

EDITOR MEDICAL AND SURGICAL REPORTER: Dr. F. Herff (*Texas Med. Journ.*, ix, 1894, pp. 613–616) give some interesting and important statistics of paraitess which he has found in San Antonio.

1. *Tænia saginata* (*mediocanellata*) is extremely common, so that in some localities it is found in nearly every family. He has never found the cysticercal stage "in beef or veal or yet in man." [The cysticercal stage does not occur in man.]

2. *T. solium.* Also very common, especially in German settlements. "The cysticereus is very often met in the pork. I will remark that I have frequently met with living and moving scolices of tænia in well-water, and am confident that they were introduced into wells by contamination from privies or by carelessly cleaning chamber-vessels near the well. Wherever such scolices were found one or several members of the family had tænia, which in some instances was discovered in consequence of the finding of the scolices in the well." [What can it be that the author has found in wells? I am entirely at a loss to know.]

3. *Bothriocephalus latus* found twelve times, generally among Poles and Swiss; two cases in persons from the other side of the Rio Grande. [This find, if correctly determined, is very important.]

4. *T. echinococcus.* Herff states that he has found this parasite in every dog he has examined; that it is common in the muscles and liver of the jack-rabbit; not uncommon in the human body (has found it six times, one case in the eye).

In *T. echinococcus* the author has evidently included a number of species. The forms in the rabbit are evidently *Cysticercus pisiformis* and *Cœnurus serialis*, both of which have several times been sent to me from Texas for determination. It is erroneous to state that *T. echinococcus* is so common in the dogs of Texas! Herff probably has *Dipylidium caninum* and *T. serialis* before him. If this species were as common as Herff reports, we should expect to find the larval stage in nearly every man, cow, horse, hog and sheep in Texas. I have already stated in another publication that *not one* of the twenty or twenty-five supposed cases of hydatids from Texan cattle which have been sent to me for determination were Echinococcus hydatids.

The cases recorded in man by Dr. Herff seem to be genuine.

5. *Trichina spiralis*, reported in eighteen persons, no deaths.

6. *Ascaris lumbricoides* frequent, especially among negroes.

7. *Trichocephalus dispar* not found.

8. *Anchylostoma duodenale*, once at least; several other cases suspected.

9 and 10. He also believes he has met with cases of *Bilharzia hæmatobium* and *Filaria sanguinis hominis*, but the data he brings forward are not convincing.

From this paper we see that a physician can gather very valuable data in his practice, but that more care is necessary in determining the parasites. In case a person is in doubt as to the form he has before him, he should send it to a specialist for determination. I shall be only too glad to determine forms forwarded to the National Veterinary College, the United States National Museum, the Department of Agriculture or Georgetown Medical College.

C. W. STILES, Ph.D.

Washington, D.C.

Salicylic Acid.

Salicylic acid and its compounds may be found useful in scanty and delayed menstruation. They should not be administered to pregnant women who have a predisposition to abort or who suffer from menorrhagia and metrorrhagia. Their administration should be watched carefully in all cases of pregnancy, and on the appearance of any "show" or anything resembling labor pains, should be discontinued.

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SATURDAY, NOVEMBER 17, 1894.

EDITORIAL.

THE A. A. R. S.

These times in which we live, among other things are remarkable for the multiplication and organization of new medical societies and new medical colleges.

The motives which inspire founders are sometimes commendable, but it is to be feared that in not a few instances the ulterior purpose in view in their creation is not so much for advancing the legitimate aims of medical science as for self-advertisement and aggrandizement.

We have a pertinent illustration in the birth of a new society with the high-sounding title of "The American Academy of Railway Surgeons."

The general trend of modern medicine is to spread itself into innumerable specialties. One of our large hospitals in Pennsylvania has recently established a special ward for appendicitis cases. This would imply that the next claimant for honors in a new field will be the "Appendicologist."

When the National Association of Railway Surgeons was first organized, many objections were made to it on the score that it was not needed and that it would be manipulated in the interests of the railroads to the detriment of the profession and the public alike. In this, however, we have been mistaken.

There is only one "national" surgical association in this country, and this is so local and limited in membership as not to fairly represent, either in numbers or talent, American surgery. For it is well known that some States have no representation in it at all, and, moreover, many of the most eminent and distinguished members of the craft have been denied membership therein. For these the National Association of Railway Surgeons offered the opportunities heretofore denied them.

It is now well known, too, that this organization is in no respect the tool of the railroad companies. As a matter of fact, many members pay their own fares to the annual convention, and others are allowed only such rebate as is extended by the railroad companies to any national convention.

But why another association of railroad surgeons—Academy, so called? The editor of the Columbus *Medical Journal*, who

was the honored and trusted treasurer of the elder body, says in the issue of that journal for October 16th, that it is "the outgrowth of a scandalous row at the Galveston meeting," etc. But while stigmatizing an organization which had placed unbounded confidence in him, and even at the Galveston meeting had selected him for its editor, why not state all the facts in order that the A. A. R. S. may be better understood, and the whole profession be better informed on the new subject of railway surgery?

Is it the fact that the new journal of the National Association was forced on its membership by its then editor; that he invited prominent members of the profession to join the editorial staff; that after the Galveston meeting he at once set to work to destroy the journal which he, but a few short months before, had forced on the association, by directly corresponding with these gentlemen and requesting them to withdraw?

So far as we can learn, the only scandal committed at the Galveston meeting was that the candidates presented by the Committee on Nominations were not accepted by the organization, and the meeting substituted a set of candidates selected from the floor; a course which the presiding officer, Dr. Galbraith, declared regular.

It looks questionable when, not satisfied with trying to destroy the journal, the only salaried officer of the organization proceeds to further undermine the National Association, and actually proposes to form a new society out of the body of the parent before the corpse is cold.

So soon as the Executive Committee were informed of the true state of affairs, it promptly convened in Chicago, removed Dr. Reed from the editorship and appointed Dr. Wm. B. Outten, of St. Louis, to succeed him.

We are not interested with side issues which specially concern but few. But when a new "academy" of a national character is to be created, it is just and proper that the whole profession should be made acquainted with its objects and the purposes it proposes to fulfill.

A SIDE-LIGHT ON THE "AUTOCRAT"—AN AUTOGRAPH LETTER FROM DR. HOLMES.

A friend whose fame is unsurpassed by any name in the American profession, but whose modesty is greater even than his fame, allows THE REPORTER to present its readers the following interesting letter from the "Autocrat:"

BOSTON, October 23, 1874.

MY DEAR SIR: I happen to be suffering from influenza to-day, with so much lassitude and febrile disturbance that I do not feel able to answer you as I should be glad to. But I am unwilling to wait longer, and therefore I must now thank you most cordially for the letter and the pamphlet which came soon after it. The testimony you bear to the sad fact which I laid before the public so many years ago confirms, if confirmation were needed, the thesis I maintained.

It is *thirty-one* years since (April, 1843), in the *New England Quarterly Journal of Medicine and Surgery*—a periodical of merit, but which died with its fourth number—I published an article which I considered settled the point of the communicability of puerperal fever from one patient to another by the accoucheur.

Dr. Meigs and Dr. Hodge attacked my position in a way which made me ashamed, both talking like class declaimers in the face of facts which people of common sense could only interpret in one way. I confess that *I* declaimed too, but I only fired powder after firing shot and shell. I have been sick of the name of "Professor" ever since.

Hundreds of lives might have been saved if, instead of ranting to their ignorant classes, they had enforced the disagreeable truth I had made plain enough for those who would not shut their eyes.

Twelve years later, in 1855, I reprinted the essay with additions, and reprinted it once more in my volume, "Currents and Counter-Currents," printed in 1861.

Of course, being separated as I have been from medical practice, I still could not help being interested in Dr. Barker's book, which he kindly sent me, and I assure you that I feel very much obliged to you for sending me your notice of it, to say nothing of the fact that I read a good part of your address, which seemed to me eminently readable as well as of great practical significance.

Forgive the petulant way in which I have spoken of the two distinguished gentlemen, one of whom was very probably your teacher. You may set it down partly to the erethysm which sometimes accompanies these wretched influenzas.

Believe me, dear sir, very truly yours,

O. W. Holmes.

ABSTRACTS.

THE DRUNKARD AND HIS CURES.

W. W. POTTER, M.D., Spokane.

I shall deal with this subject in a general way only, and yet my hope is that some practical points may be developed.

Webster defines the "drunkard" to be "one who habitually drinks to excess." Billings defines "drunkenness" as a "temporary mental and physical disorder from the ingestion of alcohol." As drunkenness is produced by many drugs, such as opium, cocaine, chloral, etc., the above definitions are incomplete and should be changed so as to include everything which intoxicates. For there are many kinds of drunkards and many degrees of drunkenness. The primal cause of confirmed drunkenness, or inebriety, as some prefer to call it, is the formation of a habit. The habit grows slowly or rapidly, according to the will and environment of the individual, and may be formed wittingly or unwittingly. Diseased appetites and organs are the result of habit. The habit itself is distinct from and always precedes the diseased condition. Moral perversion or blindness is the foundation of the habit, and diseased conditions are but symptoms indicating degrees of it. These conditions may be remedied with medicine — but medicine alone will not cure the habit. Hereditary taint does not develop habit— it does develop, however, the capacity to rapidly form one. Heredity bequeathes only aptitude, not appetite, and it is fortunate indeed that that is all it does entail.

Many excellent physicians have of late years stoutly maintained that the habit of drunkenness was simply a disease, classing it among the neuroses, and the charlatan has worked out their theory to his financial advantage and many a patient's ruin.

When, by the aid of medicines, a habit is broken, this is called a "cure." But the great majority of such cured ones relapse, the time of relapsing depending on the intoxicant formerly used and the temperament, physical condition and environment of the subject. Cure and relapse follow cure and relapse with ever-increasing frequency when medicine alone is relied upon to effect a cure.

The preacher declares that this habit is a sin, seldom recognizes diseased conditions, and very rarely does he rightly estimate the value of medicines as aids. He seeks to apply his gospel remedy only, and he, too, meets with many sad failures, for he does not realize the "weakness of the flesh."

Both doctors and preachers are right in their views, yet not wholly so, for the exact truth is found between the two. The doctor has studied only results; the preacher has seen only the cause. The doctor prescribes for physical and moral effects; the preacher for moral and spiritual. The doctor treats symptomatically, the preacher radically. If we combine the views of both physician and preacher we have a complete diagnosis. Combine their remedies and we have a complete

cure; for on the moral field the main battle with this bad habit is always fought; on the medical field sharp, but only preliminary skirmishes.

This much concerning the drunkard himself; now let us consider some of his cures.

You have all prescribed for this habit. You have tried cinchona, rubra, the bromides, the different salts and combinations of gold, strychnia by mouth and hypodermatically, and many others. With the aid of these and tact in withdrawing the intoxicant, you have found, as I have, that it was comparatively easy for the drunkard to break his habit, but exceptionally so for him to hold it thus. Though his chain of habit was broken, the links were left and still oppressed him. You saw something of his difficulties while breaking this chain. Did you appreciate his easy task in mending it again? This point is rarely recognized and guarded against except by those who have had personal experience. The moral treatment is either wholly neglected or but feeble in effort. Yet even this is better than false teachings.

The mythical bichloride of gold has perhaps been a subject of your investigation. You have analyzed it. Found only well-known drugs, and but a trace, if any at all, of gold, yet some former patient of yours has perhaps taken this treatment and is to-day an evidence of some mysterious power, for now he is a sober, industrious man. Did you study the method of giving, as well as the medicines given? Did you note the moral treatment as well as the physical? Had you done this you would have discovered that the moral effect of the teachings, the surroundings, and the methods fully accounted for the results. To illustrate this point, I quote the following from an article of Dr. C. F. Chapman, in the *Medical Recorder* of February, 1893. He says:

"Being determined to find out something definite about the matter, early last spring I obtained a position as physician to a gold-cure sanitarium. As I have had personal experience in treating about 300 cases, I feel that the few remarks I can make may be of interest to you. And, first, I am prepared to give you the formulary of the gold treatment, which is almost, if not quite, the same in all these institutions, as follows:

"No. 1. Tonic, known as the 'dope.'

Aurii et sodii chlorid	gr. xij
Strych. nit	gr. j
Atropiæ sulph	gr. ¼
Ammonii muriat	gr. vj
Aloin	gr. j
Hydrastin	gr. ij
Glycerinæ	ʒ j
F. E. cinch. co	ʒ iij
F. E. coca erythrox, Aquæ	āā ʒ j

M. Sig.: ʒ j every two hours.

"No. 2. Injection, known as the 'shot.'

Strychniæ nit	grs. 9.1
Aq. dest	ʒ iv
Potas permangan	q.s. to color

M. Sig: Begin with five drops, which equals 1-40 of a grain of strychnine, and increase one drop at each injection until the physiological effect is produced. Four hypodermic injections to be given daily at 8 A.M., 12 M., 4 and 8 P.M.

"No. 3. Used with No. 2.

Aurii et sodii chlorid	gr iiss
Aq. dest	ʒ j

M. Sig.: Three drops every four hours in combination with the strychnine solution for the first four days.

"This last prescription is used only for the moral effect, which is produced in the following manner: Five drops of the strychnine solution are drawn into the syringe, then three drops of the gold solution are drawn in and mixed. This produces a golden yellow color, to which attention is called, and the patient is further assured as to the reality of the presence of the gold by the stain left on the skin after the hypodermic needle has been removed. A positive disgust is, in almost if not in every instance, produced in the following manner: The patient is given a drink of whisky, then the so-called bichloride of gold solution (really a solution of strychnine) is injected in his arm, but at the same time, and without his knowledge, he receives one-tenth of a grain of apomorphine. It takes but a comparatively short time for the emetic to produce its effect. Now the patient acknowledges the wonderful power of the hypothetical gold compound and surrenders unconditionally. From an unbelieving scoffer, he is changed into a disciple and supporter of the prophet."

Dr. Brownson, who investigated this treatment independently of Dr. Chapman, gives a formulary for the "dope" and "shot" essentially the same. He then says:

"They are told that they can have all the liquor they want. If the patient asks for a drink of whisky he gets it, but instead of the injection of strych. nit. he receives one of apomorphine, one-tenth of a grain; of course the whisky makes him

sick. He is unable to retain his once-favorite beverage, and he writes his friends glowing accounts of the great change and new life that have come over him since taking this wonderful cure, which, he feels sure, could only have been brought about, as Mr. Keeley himself said in a lecture here recently, by Divine appointment."

On the main point both observers are agreed. It is the method, not the means, that has apparently accomplished wonders. But my observation has been that such cures seldom last more than six months; of course there are exceptional cases of longer standing. These patients are taught and believe that they are radically cured, and safe to go into temptation; but sooner or later they find, by a bitter relapse at an unguarded moment, that they have been deceived. Is it not easy to travel over a difficult road with congenial companions, especially so if all are keeping step to the same music? And is it not difficult to make that same journey entirely alone? But the country is now full of relapsed "graduates," and these are the proofs of the falsity of the disease theory. The people are seeing the actual results for themselves, and holders of institute stocks of all kinds are finding themselves duped.

I here note Dr. Breed's article on "Treatment of Alcoholism by Strychnine Nitrate Hypodermically." He holds contrary views to those just expressed, and his detailed cases show what this drug will do unaided. I agree with the doctor in extolling the virtues of this remedy, and am heartily in accord with his conclusion that "there is no reason why the public, which places its life in our hands daily, should be obliged to offer up sacrifices upon the shrine of quackery, when men can be treated privately, safely and efficiently by any family physician and thus avoid publicity, danger and expense."

There is another kind of remedy on the market. This plan is by gradual reduction, taking from two to six months for a cure. This has, at least, the merit of not being composed of dangerous ingredients. The moral effect is secured in the usual style of the charlatan.

A third class contains only substitutes equally enslaving, and though the patient is freed from his original intoxicant, he is a slave to his antidote. We can only condemn such men and such methods. Yet from these three kinds of cure we can learn a valuable lesson. They all give minute attention to the patient and carefully prescribe in detail.

A fourth method, now almost if not quite obsolete, consists in producing physical revulsion by saturating foods and drinks with the accustomed stimulant. This has proven a failure. I think we can see the reason why in a statement of one of its strongest advocates. In the introductory of Dr. F. H. Hubbard's book, entitled "The Opium Habit and Alcoholism," he states: "We shall not refer to the moral aspect of our subject." Is not this the very place where the revulsive should have been applied? Did not the trouble begin here?

Mention must be made of a purely moral agency, which is reported by recent writers as very efficacious. I refer to hypnotic suggestion.

Forel (*Wood's Medical and Surgical Monograph*, vol. v, No. 1) reports a cure of an incorrigible drunkard 70 years of age. The cure had lasted two years or up to the time of writing. The patient was, however, living with the doctor all this time, which leads one to ask the question, Would the same result have been otherwise obtained? Forel also recommends this method for "bad habits" of all kinds.

Kingsbury (*Wood's Medical and Surgical Monograph*, vol. xii, No. 2) reports a cure of nine months' standing; hypnotism was still being used at intervals, however. He reports two other cases, one of which is remarkable from the fact that though the patient had been a user of stimulants to excess for ten years, yet "after the first sitting all appetite for alcohol vanished." Unfortunately the record stops with this statement. He also details two cures of other moral perversions.

In the *Medical News* of March 31, 1894, we find an interesting article by Assistant Surgeon Bushnell, of the United States Army, on the use of hypnotism in chronic alcoholism, and while this means alone in his hands has apparently accomplished all that is done by any other plan, yet his detailed cases tell the same old story of relapses. Yet I believe that this is a means that will soon be used extensively as a valuable aid in curing drunkenness.

Dentists of repute, like Dr. Fillebrowne,

of Boston, and others, are performing dental work painlessly by it (*Dental Cosmos*, September, 1893, p. 985), and no less distinguished a surgeon than Professor Senn, of Chicago, is reported as using it for anæsthetic effects, and successfully. This evidently powerful, though but little understood, moral remedy should be thoroughly investigated. All prejudices must be laid aside, and, if proven efficacious, the victims of drink and drug should be given the benefit of its aid. We stand on the broad platform of true eclecticism and we cannot refuse to use the good wherever we find it.

Therefore, I here mention another cure. 'Tis religious conviction; and I know of no more powerful and lasting moral revulsive than this one. Cures of this kind we have all witnessed, and I am compelled to state, after three and one-half years of honest seeking for the best remedy, that this is the only one that has any holding power in it. In other words, provides against a relapse. Relapse is the rule with other remedies, but not so with this one, and majorities prove the preacher's theory correct. This remedy is as unpopular today as ever, but it is as powerful as when Naaman tried it. As physicians we can, of course, understand that the *vis medicatrix naturæ* works out the physical cure in these cases, and those treated by hypnotism as well; but, after all, this is the main agency, whether recognized or not, that is most powerful in all cures.

After my short experience with this class of patients, I am of the opinion that drunkenness is curable if the drunkard wills to be cured. But we must be sure he wants to quit, to the extent that he is willing to be guided by us for a long time after he has quit. Remember he is but a weak child when this habit is first broken, and needs child-like protection and guidance. Here is where both physician and patient ofttimes err, especialy if the patient appears to be physically strong. He must now be kept busily occupied at some healthful employment, and should be taught that he must be perpetually on guard against the next dose.

While secret remedies have no advantage whatever over non-secret medicines, the secret use of them with the patient is absolutely necessary, and careful, prompt attention to all details inspires his confidence and insures success.

Whatever we do, we must be careful that our moral influence is in the right direction; ever remembering that a medical cure is but a half cure; that we are dealing with a compound ailment—sin and sickness—and our remedies, though grand aids, are at best only palliatives. Never bar the way of the preacher by teaching that this habit is only a disease. The disease theory is popular with those who find difficulties in the way of breaking their habit, but it is also an excuse for others to continue their debauches and deviltry. The preacher's remedy is needed always to complete the cure. We must teach these patients to be ever on guard against the drink and drug storms that are yet to come; we must show them then the place of sure protection when they do come, and instruct them how to form new habits to replace the old; for as

> "Thread by thread the strand we twist
> Till they bind us neck and wrist," so
> "Thread by thread the patient hand
> Must untwine, ere free we stand."
>
> "First across the gulf we cast
> Kite-borne threads, till lines are passed,
> And habit builds the bridge at last."
>
> —*Medical Sentinel.*

Double Femoral Herniotomy.

Dr. S. E. Milliken, New York (*La Revista Med.-Chirurg.*), reports a case of double femoral herniotomy in a woman at the advanced age of 64 years. Deep sutures of kangaroo tendon were used to close the crural canal, while catgut was employed for bringing together the skin wounds. The dressings were changed for the first time on the tenth day, when union was found complete and the superficial sutures had been absorbed. The highest elevation of temperature was 101° F., which occurred within forty-eight hours and was attributed to the shock of the operation. Conclusions:

1. Age is no contraindication to the employment of the radical cure of hernia.

2. Asepsis and antisepsis should be carefully observed.

3. Even in cases of strangulation, the radical cure should be attempted if the condition of the patients warrants the delay.

4. When the truss becomes a source of annoyance, or if the hernia is difficult to retain, the operation should be performed without delay and before the strangulation occurs.

SUNSHINE AND MICROBES.

One of the most novel and extremely interesting revelations concerning the sun's terrestrial influence has been recently made in connection with the life of microorganisms. As every one knows, microbes, while capable of performing the most indispensable service to man in such important directions as the breaking up of refuse organic matter, the fertilization of the soil, the production of alcohol, etc., may and do become extremely objectionable when they venture outside their particular spheres of utility. Under favorable conditions a new generation of bacteria may be inaugurated every twenty minutes or half-hour. Thus it can be calculated that if such multiplication went on without let or hindrance, a single bacillus would in the course of twenty-four hours have given rise to a progeny four times as numerous as the whole population of London, while at the end of forty-eight hours their number would be represented by the wholly unmanageable figures—280,000,000,000,000! One agency which has only recently begun to be understood and appreciated is the power of sunshine to destroy these microorganisms.

The first and most important step in revealing the cleansing and disinfecting properties of sunshine was made in this country about sixteen years ago by two Englishmen of the names of Downes and Blunt. These investigators established the remarkable fact that if certain liquids capable of undergoing putrefaction, or in common parlance of "going bad," were exposed to the direct rays of the sun, they remained perfectly sweet, while exactly similar liquids kept in the dark became tainted and exhibited innumerable bacteria under the microscope. Numerous most important and interesting experiments were made by these investigators, with the object of finding out how these wonderful results were brought about and upon what factors they were dependent. In the first place, it was ascertained that the oxygen of the air had a marked effect in assisting the sun's work, and that the bacteria suffered more from the sun's rays if the proportion of oxygen was increased, and less if it was diminished, thus clearly pointing to processes of oxidation as being the cause of the phenomenon. Recently M. Momont, in the Institut Pasteur, has obtained more exact information confirming these experiments by exposing the bacilli of anthrax to sunshine in the presence and absence of air, with the result that while the anthrax bacilli exposed to the sun in the presence of air were killed in two and a half hours, similar bacilli placed in a vacuum were still alive after fifty hours' exposure to sunshine.

The next problem to be attacked was to ascertain whether all the solar rays were equally responsible for this important result or whether the different-colored rays composing the sun's beams produced different effects, as is known to be the case in those important vital processes which go on in green plants. Many investigators besides Downes and Blunt have bestowed attention upon this interesting question, but it was perhaps first most successfully attacked by Dr. Geisler, of St. Petersburg, now some two years ago. This investigator decomposed the white sunbeams by means of the prism, and then exposed typhoid bacilli to the light of the spectrum. The rays at the red end he found had little or no effect at all on the growth of the bacilli, while the most powerfully deleterious action was obtained in the ultraviolet, the effect becoming less and less marked in passing from this to the red. On this point, in fact, all investigators are agreed—that the rays which exert this destructive or inhibiting effect on bacterial life are precisely those which also exert the most powerful action on the ordinary photographic plate.

Even if the exposure to the solar rays is not sufficient to actually destroy the bacteria, it may yet profoundly modify their character and bring about the most important changes in their subsequent behavior. Dr. Palermo, of Naples, placed some of Koch's cholera bacilli in the sunshine for various periods of time, and he found that while, when he protected them from the sun, they killed guinea-pigs in eighteen hours as usual, after they had been "sunned" for from three and a half to four and a half hours they were perfectly harmless, and the animals experienced no evil results whatever from being treated with them. The cholera bacilli

which refused to kill the guinea-pigs had not been destroyed, nor had their total number suffered any diminution by the action of the sunshine during this short time, but their inability to work mischief was directly due to the removal during this exposure of their virulence or disease-producing powers. More than this, the further important discovery was made that those guinea-pigs which had survived the above inoculation with these sunshine-exposed or insolated cholera bacilli, had acquired immunity toward this disease, or, in other words, were protected from contracting it afterward, much in the same way as vaccination with cow-pox protects the individual from an attack of small-pox. Thus when eight days later these particular guinea-pigs were inoculated with virulent cholera bacilli they were quite unaffected by doses which to ordinary guinea-pigs proved rapidly fatal. Thus by exposure to sunshine these disease microbes were not only deprived of their sting, so to speak, but were converted into useful servants in protecting their former victims from the attacks of their still viciously disposed brethren.—*Nineteenth Century.*

THE CURATIVE SERUM IN DIPHTHERIA.

The meeting of the "Naturforscher" could not possibly pass without a declaration on this all-important subject, and for this Behring and Ehrlich were the heroes. Behring led off with the first paper. He said the curing of acute disease by means of specific applications was not thought of till very recently, when the toxines were found to possess an antidote for tetanus and diphtheria which are not exactly complete in all the details yet, although far advanced in proving the efficacy of the method now adopted. Diphtheria and tetanus appear to be solved, and shortly typhoid, pneumonia sysa, if not tuberculosis, may be added to the list. He tells us that his attention was attracted to the subject in 1880, when wounds and bacteria were receiving special attention. In pursuing this further, he experimented with iodoform in this direction in the following year. From these experiments he concluded that the bacteria themselves were not to be wholly considered, but that the toxines or products were more important than the microbe itself. In 1890 his first success was in the cases of diphtheria in guinea-pigs, which has now been extended to man. This anti-toxic immunity was then proved to reside in the serum; but Ehrlich, by more extensive experiments, has proved its existence in plant life also. It is found by experiment that the oftener the inoculation the greater will be the immunity; the protective power remaining the same in quality, but the quantity varying in different animals. Another step forward was made by Pasteur in his weak and virulent cultures where immunity was obtained by a slow process of growth. This method may now be relegated to the past as a mark of our forward progress and success in the serum treatment for diphtheria and tetanus, which may be extended indefinitely. We have material before us that may open up a great future in the records of therapeutics. We have now almost mastered the proof of applying an antidote for infectious diseases on the first appearance of the disease or checking and modifying the chronic. Protection is equally established, but whether the microbe is killed or the receptive faculty of the body destroyed is not yet clearly demonstrated.

With this knowledge of diphtheria we are now able to calculate our gain on the effects it will have on population during the next decennium if the serum therapeutics be adopted. In Germany and Austria alone, roughly speaking, 2,000,000 children die every ten years from diphtheria. Of these it is assumed under the new *régime* that one and a half millions will be alive at the end of this period. It has now been admitted that within the first three days 10 per cent. of the cases die, and 5 per cent. of those commenced within four hours. If the prophylactic virtue of the serum were commended sufficiently early, this moiety of death could be averted, which can be accomplished with very small doses at half a mark each.

Ehrlich said that we owed a deep debt of gratitude to Behring for his untiring efforts on this subject without remuneration or assistance of any kind. After all the albuminous fluids of the body had

been tried, the blood serum had at last been found to be the most practicable. The milk of an immune animal can also be used with efficacy, but cannot always be practicable. The Berlin "Kinderanstalten" have not been so successful in the use of the serum as many other institutions appear to have been, as 53 deaths are recorded out of 530 attacks. These results must be taken with reserve, as too small doses were given at the commencement of the treatment, as proved by the better results later on. He refrained from foreign statistics, and promised to keep to his own results. Of 40 cases, 20 of whom were tracheotomy ones, only 6 of the latter class died. In other 41 cases where the serum was not used 18 died. On another occasion he treated 48 cases and only 6 died, making a death-rate of 15.05 per cent. of the total number treated. If the moribund cases on reception were eliminated this number would fall to 8 per cent., or if those suffering from nephritis, myocarditis, etc., were removed, the genuine diphtheritic mortality would be under 3 per cent.

Referring to the clinical aspect of the drug, a critical fall of temperature was noticeable on the first dose being applied in fresh cases; the pulse was similarly affected, after which the euphora set in. The prognosis is always favorable in early cases, although advanced ones must be received with caution.

The usual advertisement followed that it was manufactured by Meister Lucius, under the superintendence of himself and Aronsohn; that there were three sizes in the market, viz., 600, 1,000 and 1,600 c.c. tubes, the dose being 10 c.c. For freshness he recommends the 600 tube, containing ten doses and costing five or six marks.

In the discussion that followed these papers, Aronsohn gave a description of the preparation of the serum. His method was to obtain the most virulent form, so that the antitoxin would be found in the most concentrated form. His opinion is that the curative effects of the serum are not obtained unless the culture be virulent. He claims to be the first who made use of the horse. To increase the virulence, he used to drive air and nitrogen over the cultures, but is now in favor of the growth method, by which the culture assumes a thick white lamella so virulent that one dose, 0.5 in strength, will kill a guinea-pig in forty-eight hours.

INDIVIDUAL DISPOSITION.

Wasserman raised the question of resistance in the blood of the aged; the older a person was the organism was correspondingly resistant, and between 50 and 60 diphtheria could not be induced. In the laboratory he had taken 1 c.c. of blood from such an individual and found it perfectly antitoxic, having ten times the strength of one that will kill a diphtheritic culture. The blood can be accurately estimated according to age. In ten children varying from 4 to 15 he found antitoxic virtue in half the cases; in fourteen men between 20 and 40 years, ten were antitoxic; between 40 and 50, nine out of every ten were so. He does not believe in a congenital susceptibility of diphtheria, but is firmly convinced that it is acquired by age and the constant irritation of the virus on the throat, eyes and other parts of the body. He tells that he obtained the most virulent in two healthy individuals!

Escherlich was also of opinion that the virulence of the bacillus did not determine the severity of the disease, as he had met with very light cases where the bacillus was virulent and *vice versa.*—*Med. Press.*

Simple Maxims.

Doctor, here are a few simple maxims for you to impress upon your humble patrons:

1. Maintain an invariable recurrence of defecation.
2. *Ingest* not that which will *digest* not.
3. Shun straightforward aerial influxes.
4. Keep your textile vesture in consistent relationship with your meteorological environment.
5. Let your prandial repast generously exceed the others.
6. Avoid intense luminous reflexes while poring.
7. Contemplate not the vinous product when it is ruddy.
8. Be non-excessive in indulgence through the entire category of things that be.
9. An intact intellect within a hale corpus is the *summum bonum*, with reference to all that most nearly affects you.—*N. C. Med. Herald.*

THE ATMOSPHERE AND LIFE.

Calculations based on observations of luminous meteors lead us to believe that the atmosphere is not less than one hundred miles deep, and may be two hundred. The laws governing the pressure of gases and the action of gravity tell us that it must in shape be an oblate spheroid with the poles markedly flattened, much more so, indeed, than is the case with the earth itself. Since it is able to support a column of mercury or water weighing about fourteen and three-quarter pounds in a tube with a diameter representing one square inch, it must press upon the surface of the earth at every point with about this weight. An ordinary-sized man bears constantly upon his body a pressure of about fourteen tons; but as this pressure is in all directions, and from within outward as well as from without inward, the compensation is perfect and reduces the actual pressure to practically nothing.

The breathing of plants and animals is the same. Not long since it was believed that animals only required oxygen and that plants required carbon dioxide. This was an error. Plants do not breathe carbon dioxide, but, like ourselves, oxygen. They, however, find by far the largest volume of their food in the carbon dioxide of the air. This they decompose by aid of direct sunlight, and by seizing upon the nascent carbon convert it into plant tissue, while the oxygen escapes into the atmosphere. Since they thus release far more oxygen than they require for themselves, the air is kept constantly pure by their good service. Because they provide an oxygen balance of this kind, and have ever done so, to them we are indebted for the character of our present atmosphere and its most marked difference from that of primitive times. They have during countless millenniums been free oxygen manufacturers. Beginning their work in an atmosphere that was oxygenless, they have gone on with their good services until it is now fit for the breathing of healthy human beings. The change from the wholly irrespirable air of early times to the perfectly respirable air of to-day has come through slow, insensible degrees. Step by step it has been transmuted into the fitness that has made possible warm-blooded, quick-acting and quick-witted creatures. Had the work of plants not preceded us we could never have been; and should they stop such work it would mean speedy extinction for us. Our lives are bound up in theirs and theirs in ours by a reciprocity so perfect that it is marvelous. Imagine two sets of machines so adjusted that the running down of one winds up the other and the stopping of either stops both, and you will have a partial conception of the intimate relationship of the two. Our breathing and the fires of our homes and workshops supply them with much of their daily food, and they supply us not only with food and clothing, but with pure air as well. Had the vegetable world succeeded in converting all the carbonic-acid gas of the primitive atmosphere into oxygen and carbon, the proportion of oxygen to nitrogen would have been much greater than it is. The weight, too, of the atmosphere would have been very materially increased and our coal beds would have proven far vaster than they are.

A very large part of the purification of the early atmosphere we must credit to the mineral world. It markedly diminished the atmospheric weight for us. In the burnt-up rocks of azoic times calcium and other such elements were left as oxides and hydrates. Now we find them forming mountain chains and immensely deep strata as carbonates, the greatest proportion of their weight having been absorbed from the air. Every bed of limestone, chalk and marble illustrates this point. The quantity of carbonic-acid gas these have absorbed from the air is so vast that if released again the world would no longer be fit for us to inhabit. One is almost constrained to believe that in this early absorption of the mineral world can be found a purposive act. It certainly looks as if eons of ages ago the way was being prepared for our advent. Every change led thitherward. Had the mineral world not absorbed the carbon dioxide, but left all the work to the plants, we might have had more oxygen than to-day, but we would likewise have had more pressure. This in turn would have required changes in the structure of our tissues that would have made such life as we now have impossible.—*Public Opinion.*

TREATMENT OF PERFORATION OF ROUND ULCER OF THE STOMACH.

At the Surgical Congress held at Lyons, M. Michaux spoke on perforation of round ulcer of the stomach and its treatment. The question, he said, of the surgical treatment of simple ulcer of the stomach has not yet been brought before an assembly of French surgeons, and he would like to say a few words on the surgical treatment in case of perforation of these ulcers. The following personal case was, he believed, the first successful intervention of the kind obtained in France:

In September, 1893, a laborer in the employment of a railway company was brought to the hospital, with the following history. On the night before, in lifting a rail, he felt an intense pain in the epigastric region, with sensation of something having given way inside. A half-hour afterward, the pain getting worse, the man drank a glass of wine; hardly had he swallowed it than the burning in the stomach became greatly intensified, and toward morning he vomited the liquid mixed with bile. When examined by the speaker, the man did not seem to be in a very alarming condition; the face was a little anxious, the pulse full (80), the temperature 100° F., the abdomen contracted, but the suffering was very acute. All these symptoms indicated a rent in the stomach or in the upper portion of the small intestine. An immediate operation was advised, and after some difficulty the patient gave his consent. An exploring incision stretching from the ziphoid cartilage to the umbilicus was made and the peritoneum opened; at this moment some vinous liquid, together with a small quantity of alimentary *débris* derived from the evening meal, flowed out. The incision was enlarged, the liver turned up with the hand, and high up under this organ and the diaphragm the operator perceived a small tear on the anterior face of the stomach within an inch of the cardiac orifice. An attempt was made to draw the edges together with suture, but the tissue was so friable that the stitches would not hold. A fold was consequently made in front of the perforation, which was hidden at the botton of the fold by a double line of silk sutures, and a piece of iodoform gauze was placed over the sutured part, conducting the liquid to the abdominal wound left open for safety.

The following days the patient was nourished by the rectum, and at the end of a week the iodoform gauze was removed. A fistula was the final result, but the patient, who for the first month was reduced to a skeleton, gradually gained flesh, so that at the end of five months he had attained a remarkable corpulency. At this time also a successful attempt to close the fistula was made, and to-day the man is at work again. The works, continued the speaker, of Cruveilhier, Rokitansky, Brinton, Debove, Bouveret, etc., have given us some very interesting statistics that he desired to recall to memory. Perforation of the stomach is a frequent complication (13 per cent.) of ulcer; it is observed more frequently in man than in woman after thirty, and is sometimes produced by an effort. A curious fact is that if the ulcer is most frequently found near the pylorus, the perforation is generally met with near the cardiac orifice.

How can perforation be recognized clinically? The chief symptoms are: Intense gastric pain, a sensation of burning, of something torn inside, increased by the ingestion of food, retraction of the abdomen, absence of dullness over the liver, and, finally, all the symptoms of localized or generalized peritonitis. Vomiting is rarely present. In the face of these facts, the necessity of prompt surgical intervention is constant. The operation has been already practiced in Germany by Czerny, Steinhal, Kriege, Nissen; in England by Hastings, Gilford, Howard, Morse, Maclaren; in Switzerland by Roux, of Lausanne; while in France the operation has been performed by Poncet, Le Dentu, Walther, and the speaker. The operation has been done in all 25 times. The first ten cases ended fatally; of the fifteen others five were successful, those of Kriege, Morse, Maclaren, Roux, and his own just described. The secret of success lies in the promptitude of the operation: it must be done within fifteen hours after the accident.—*Medical Press.*

CURRENT LITERATURE REVIEWED.

IN CHARGE OF ELLISON J. MORRIS, M.D., AND SAMUEL M. WILSON, M.D.

IN THE NEW ORLEANS MEDICAL AND SURGICAL JOURNAL

for September Dr. Will H. Woods reports a case of

Hysterical Deafness and Otalgia Cured by Hypnotic Suggestion.

The patient was a hysterical young man, nineteen years old, who complained of increasing deafness in the right ear. No objective symptoms could be found, and after the first visit pain also was complained of.

Finding on inquiry from his brother that the patient showed other symptons of nervous derangement, the author tried to hypnotize him and found it satisfactory. Until he denied the possibility of a relapse the patient returned a few times for a repetition of the treatment, each repetition showing immediate transient effect. Finally denying the possibility of a recurrence the patient failed to complain of one.

The author thinks his case corroborates the statement of Prof. W. C. Wood that the benefit in these cases is solely due to impressing the patient, while in the hypnotic state, with the delusion that something has occurred to cure him.

Other articles in this number are "Progress of Surgery," by Dr. R. S. Hill; "Psoriasis," by Dr. William S. Gotthell, and "A Case of Congenital Malposition of the Kidney," by Dr. Augustus McShane.

IN THE BROOKLYN MEDICAL JOURNAL

for November appears a very interesting article on

The Treatment of Constipation in Cases of Tea Poisoning

by Dr. James Wood.

The author found 40 per cent. of these cases troubled with marked constipation and 15 per cent. with constipation alternating with diarrhœa.

Finding the secondary symptoms of the constipation important, a number of laxative and cathartic drugs were used, colocynth giving good results in many cases, but failing to be of permanent benefit so frequently that it was stopped and cascara used in its stead.

The treatment adopted was as follows: A purge of eight grains each of calomel and jalap was given at night, and followed by from one half ounce to one and a half ounces of Rochelle salts, to completely empty the bowels. For several days the patient was kept without other food than hot milk, and given two grains of caffeine and eight of sodium bromide every four hours.

The certainty of a relapse of tea drinking, if not guarded against, was recognized, and the patient warned to use neither tea, coffee nor any kind of liquor.

Cascara is now ordered in doses of fifteen to forty minims every four hours, and by degrees the dose is increased and the interval lengthened until one half drachm to one drachm given at night will insure one or more free passages daily. On account of its palatability the author chose the aromatic elixir or aromatic fluid extract of cascara.

As soon as regular movements of the bowels are established the following prescription is usually written:

Insp'sated ox bile (pure Merck)....	℥ij
Sulphate of quinine.....	℈j
Sulphate of strychnia.....	gr. j
Extract of cascara sag.....	℈j
Extract of euonymus.....	℈ij
Extract of gentian..... ..	q. s.

Divide into 40 capsules and give two night and morning.

The ox bile is intended to prevent intestinal putrefaction, to stimulate peristalsis, and hasten absorption, and being absorbed assist the formation of more bile. Fowler's solution is often given with benefit at this stage.

It is advisable to continue treatment for some time after improvement is noted, and the author gives the following tonic pill:

Strychninæ sulph....	gr j
Caffeine mur. . ..... }	āā ʒj
Ext. damianæ..... }	
Cocaini mur.....	℈j
Ext. tanaxaci.....	ʒss

Divide into 20 pills and give two daily.

The caffeine and damiana act as tonics to the spinal centers; the cocaine is only used when there is a hyperæsthesia in the solar plexus causing a sinking sensation.

In a previous article by this author the symptoms of the over-use of tea were given as constipation, neuralgia, insomnia, hallucinations, palpitation of the heart, and other symptoms of general nervous and cerebral irritation, and the fact was noted that when green tea was used the symptoms of intoxication were much more severe than if the black variety were chosen. This was mainly due to the green tea containing a larger amount of volatile oil, which the black loses in drying by heat.

Physiologically caffeine is shown to differ greatly from theine in its action on the heart, splanchnic plexus, etc., but to coincide to a certain extent in its effect on the brain, kidneys, etc.

This explains, the author says, the unsatisfactory results often found after the prescription of caffeine; damaged tea leaves are deprived of their alkaloid, and the latter, theine, sold as caffeine. True caffeine seems to be a physiological antidote to theine in regard to the heart.

The first article appears in the *American Medico-Surgical Bulletin*, page 1028.

Dr. Arthur Clarence Jacobson reports a case of diabetes mellitus, interesting because the amount of urine passed is not above the normal (diabetes decipiens), and because the first symptoms appeared after the age of 59 and the patient a woman.

IN THE TEXAS SANITARIAN

for October, Dr. Frank S. Parsons discusses

The Treatment of Pneumonia in Children.

Dividing this affection into the two great varieties, croupous and catarrhal, the author recognizes in croupous pneumonia an acute, self-limited inflammation due to a specific organism, pneumococcus, but does not think the anti-pneumotoxin of the German investigators can be put to a practical use in treatment. He does not think a croupous pneumonia can be absorbed by any means, but seems to refer to those cases which have passed the first stage.

The greater disturbance shown by children with pneumonia is thought due to the comparatively small size of the alveoli compared to the bronchi.

The indications are to produce elimination and consequent reduction of temperature by diuresis and diaphoresis, to lessen coagulation by increasing the alkalinity of the blood, and to relieve restlessness and promote sleep. All of these indications seem met by liquid Dover's powder, spirits of nitrous ether and acetate of potash. A large, well-ventilated room, slightly darkened and at about 70° F., is the best sick-room, but of course often unobtainable.

To avoid shock the author uses a warm bath instead of a cold one, and also prefers aconite to veratrum and dislikes the use of coal tar antipyretics. Purgatives and expectorants seem injurious.

Nitro-glycerine is mentioned as useful in preventing cardiac failure by capillary resistance. The author seems to think belladonna also will dilate the capillaries.

Catarrhal or broncho pneumonia is more common in infants than the preceding variety, and the author treats these cases in a different manner. The child is wrapped in a long nightgown of cotton flannel and has a thick chest protector of the same applied. Chloral hydrate is the favorite antipyretic, and to increase and liquefy the secretion a kettle of water with or without turpentine is kept boiling in the room. An expectorant mixture being usually required, some combination of ipecac, usually with opium, is preferred, and the following seems satisfactory in most cases:

Vin. ipecac	f 5j
Potass. acetatis	3ss
Tr. opii camph	f 3ij
Elixir simplicis	f 5j
Aquæ destillate q.s.	f 5iv

S.: f 5j every two hours for infant six months old.

To free the stomach and intestines of mucus a little calomel, or, the author says, a solution of hydrozone, one teaspoonful to one half pint of water, is useful.

Digitalis may only be used in the later stages of croupous pneumonia, but may be used with or without whisky at every stage of the bronchial variety.

Dr. Matthew M. Smith reports a "Monstrosity Born Without Limbs or Sexual Organs," and living for twenty days, finally dying from neglect.

Other members present had seen infants without sexual organs and without the long bones of the limbs, but none knew of a case similar to the one reported.

PERISCOPE.

IN CHARGE OF WM. E. PARKE, A.M., M.D.

MEDICINE.

The Modern Treatment of Diphtheria.

Fischer, of New York, contributes the following conclusions to the *Post Graduate:*

1. Local disinfection—careful, distinct nasal antisepsis by means of naso-pharyngeal irrigation; this can be done by irrigating with warm salt water (1 drachm to the pint); the addition of bichloride of mercury (1 grain to the pint), or of borax (1 to 2 drachms), or acid salicylic (4 grains to the pint), is regarded as an improvement by some. It should be thrown with enough force to flow out of the other nostril and partly by the throat. Tearing the membrane by using force will cause epistaxis, and is not advisable. Jacobi says in his treatise of diphtheria (page 208): "When they see benzoate of sodium destroying bacteria in a glass vessel, they take it for granted that the human system will permit of the same action as a glass vessel. Thus benzoate of sodium is sent into the stomach or pulmonary artery under the order to do the same as it does in the laboratory. The drug has, in consequence, had a short life, after having been extolled in a very limited time by microscopists," etc.

Jacobi concludes by saying that as an antidiphtheritic or antipyretic it utterly failed. Frequent applications of pepsin, trypsin or papayotin with a medicine dropper may be indicated in some abstract cases. Naso-pharyngeal irrigation will cause the neighboring enlarged glands to become reduced in size quicker than all other treatment combined.

2. Sponging with peroxide of hydrogen hourly.

3. Internal administration of stimulant drugs—ferric chloride for tonic effect. Alcohol, no matter at what stage, is indicated in all cases of septicemia, be they diphtheritic or not.

4. Liquid diet—milk, beef-tea, milk-punch; rectal feeding if necessary.

5. Local applications of cotton swabs moistened with bichloride (1 to 1,000 to 1 to 500), applied with great pressure every two hours, as an abortive plan of treatment, if the case is seen early.

6. Antipyretics. If at all useful, salicylate of sodium is the best, in doses of 2 to 15 grains

every two hours or more, according to the age and tolerance of the patient. If the drug is not well borne, antipyrin or antifebrin may be given.

The temperature in uncomplicated cases of diphtheria has given little trouble, except when complicated by scarlatina. Cold applications—cracked ice and ice cream—are very grateful to patients.

Calomel, to empty the bowels and reduce the temperature, is a mercurial salt, besides being a valuable intestinal antiseptic. Orange and lemon juice are also highly beneficial. The complications and their management must be considered in each case. So must the question of intubation and tracheotomy, to which the author only refers. Every case must be studied, and the treatment based on the previous habits, the general condition, the severity of the attack and the amount of the infection.—*Fort Wayne Med. Mag.*

Effect of Mercury on the Kidneys.

Welander (*Hygeia*) has had the opportunity of observing ninety-seven cases of syphilis before treatment with mercury and during the administration of the drug. He found that its elimination was accompanied by a greater or less irritation of the kidneys, manifested by casts in the urine. These casts increase in proportion to the length of the treatment, gradually decrease after its cessation, and generally disappear within a month or six weeks. No injury to the kidneys, either temporary or permanent, was observed.—*Universal Medical Journal.*

The Treatment of Whooping-Cough with Quinine.

Baron (*Berliner klinische Wochenschrift*) reports on fifty cases of whooping-cough treated after the old manner of Benz-Ungar, which they advocated in 1868. In a few children the good action of quinine was noticed in two or three days, but in most of the children the results were shown after several days.

The first evidence of value is the lessening of the night attacks. The improvement continues until health is restored, unless the dose be too suddenly reduced. The author continues the administration of quinine for three weeks. Relapses do not occur in children treated with quinine. In spite of the fact that the quinine was not given as regularly as directed in more than half the cases, there were only two failures noted. The treatment is of unusual value in the cases of acute inflammation of the lungs caused by the whooping-cough.

Since the thorough trial of quinine, whooping cough has lost all its terrors to the author.

The proper dose of quinine is one-sixth of a grain for each month of the child's age, and one and a half grains for each year, given three times in the day, at 6 A.M. and 2 and 10 P.M. More than six grains three times daily is not necessary for older children. As the case improves the number of daily doses is decreased.—*University Medical Magazine.*

The Treatment of Typhoid Fever.

Osler, of Baltimore, in discussing the treatment of typhoid fever at a recent meeting of the Clinical Society of Maryland, said he thought that the antipyretic drugs were entirely superfluous in this disease. The cold bath is more efficacious, but is not always available in private practice; but all the good effects of the bath can be obtained by sponging. A good nurse or doctor can sponge the patient so effectually that the fever will be satisfactorily reduced. When the temperature is high ice sponging—not with ice water but with lumps of ice—over the back and legs will reduce the temperature very pleasantly to the patient and satisfactorily to the doctor. Delirium and stupor are also effectively treated by ice sponging. The use of antipyretics in typhoid fever is, in nine cases out of ten, positively hurtful. They reduce the heart's action and cause weakening sweats, and their use is an unmitigated evil. In the great majority of cases the treatment may be taken from old Dr. Nathan Smith, of Yale, which was pretty much that of to-day. Plenty of fresh air, liquid diet and cold externally. He was in the habit of turning out the friends of the patient, putting the patient on the floor and then dashing water, handed through the window by an assistant, over the patient.—*Canadian Practitioner.*

Mechanical Insufficiency of the Stomach.

According to Boas, the expression ectasis, or dilatation of the stomach, is not in accord with the present stage of science. The determination of the size of the stomach is no criterion whatsoever for the disease "dilatation of the stomach," since it is almost impossible to obtain a correct opinion of the size by the different methods at present in use, because a stomach which is easily extensible can rid itself of its entire contents, whereas one which can only be extended with difficulty will never become empty. Fortunately this method of examination is not the only one at our command—the fluctuation of the stomach, the gurgling when the organ is empty, the presence of peristaltic or other movements, diminished urine, thirst, severe constipation, copious vomiting, and previous history, are much more important than the determination of the size and position.

In the diagnosis the most important point is not whether the stomach lies higher or lower, or whether it is smaller or larger, but what it is able to accomplish. Instead of the expression "dilatation of the stomach," "mechanical insufficiency" should be used.

What method is there for diagnosing the presence and degree of a mechanical insufficiency? The best way is to determine whether the stomach will rid itself of a meal of known quantity in a specified time. It is best to examine the stomach in an empty condition. Give the patient a supper of cold meat, white bread and butter, and a large cup of tea given at eight o'clock in the evening. A normal or slightly atonic stomach will completely get rid of such a meal during the night, but if the motility is greatly re-

duced, certain portions of the meal will remain in the stomach, and the contents can be examined in the morning as to their quantity, acidity, and process of fermentation. If the stomach constantly shows such masses, which have usually undergone fermentation, a severe motor insufficiency is undoubtedly present. If the stomach is empty after such a meal it is either entirely healthy or only slightly insufficient.

We can recognize two degrees of mechanical insufficiency: the first, or slight, and the second, or more severe insufficiency. These two degrees can be separated as regards course, prognosis, and treatment.

The course of a mechanical insufficiency of the first degree, which is called atony, is a chronic one; the symptoms are less characteristic and are those of a chronic dyspepsia; vomiting, if present at all, is slight, and it never contains products of fermentation. In such cases it can be shown that the stomach works slowly, but still empties its contents completely. The chemical examination of the contents of the stomach is of less importance than the microscopical; by this it is seen that the characteristic sarcinæ are only rarely present, bacteria are scanty. The bowels are either slightly costive or normal. The prognosis of this degree is not bad, as cure is frequently effected.

The forms of mechanical insufficiency of the second degree, as far as they are not due to stenosis of the pylorus, are caused by irregular living or excesses in eating and drinking, and in these the prognosis is much worse, the most dangerous symptom being inanition Cures may, however, take place even here.

In the treatment the stomach must have as much rest as possible. In insufficiency of the second degree carbo-hydrates and fats should be restricted. Massage, faradization, and hydro-therapeutic measures may be successful. In severe cases, the stomach must be washed out, antifermentative remedies given, and the patient fed per rectum. Salicylic acid especially is of great importance.—*American Medico-Surgical Journal.*

The Frequency of Renal Albuminuria, as Shown by Albumin and Casts, Apart from Bright's Disease, Fever, or Obvious Cause of Renal Irritation.

Shattuck (*Boston Medical and Surgical Journal*) has examined the urine of patients seeking his advice for various ailments. He has used it boiling with additions of nitric acid and the Heller test, and considers them the most satisfactory.

He concludes his article as follows:

1. Renal albuminuria, as proved by the presence of both albumin and casts, is much more common in adults, quite apart from Bright's disease or any obvious source of renal irritation than is generally supposed.

2. The frequency increases speedily and progressively with increasing age.

3. This increase with age suggests the explanation that the albuminuria is often an indication of senile change.

4. Though it cannot be regarded as yet absolutely proved, it is highly probable that faint traces of albumin and hyaline and finely granular casts of small diameter are often, especially after 50 years of age, of little or no practical importance.—*University Medical Magazine.*

Diabetic Coma.

From observation in 400 cases of diabetes, Kulz found that numerous casts appeared in the urine before and during diabetic coma. Only a minimal amount of albumin was present as a rule. The occurrence of casts in the urine is, however, of great importance, and a noteworthy prognostic sign of approaching coma. No difference was noted in the number of casts, whether the coma terminated fatally or in temporary recovery. With the disappearance of symptoms of coma, the casts vanished from the urine. Sandmeyer also made a communication on this subject at the German Congress f. innere Medicin in 1891. In 20 cases of diabetic coma he found numerous casts in every case. They were present when the prodromal symptoms occurred and also when the coma was marked.—*Braith. Retrosp.*

The Cure of Progressive Paralysis.

Marro and Ruata, Royal Academy of Medicine in Turin (*Gazz. degli Osped*): The speakers presented a man and a woman who had been treated for progressive paralysis, one being quite cured since three years, the other since one year. The mode of treatment consisted in causing the formation of subcutaneous abscesses in various places on the back along the spinal column, by means of cantharidate of potassium injections in the man, and essential oil of turpentine in the woman.

During the discussion, Lombroso stated that he thought the recovery due rather to the general febrile state induced by the injections than to the formation of abscesses. He recollected having seen several recoveries from progressive paralysis after the occurrence of small-pox, and confessed that he had once artificially caused small-pox in a patient, this measure being followed by recovery.

Marro said he would not insist upon the exact explanation of the curative process, and would merely remind his hearers that in variola there was an extensive suppuration. Lombroso asserted that he could call to mind a case in which the patient had been cured after an attack of typhoid, in which there is no suppuration.

Nitro-Glycerine in Sciatica.

Dr. Lawrence (*Revista de Ciencias Medicas de Barcelona*) reports the case of a carpenter of fifty-two years, who suffered for several weeks with sciatica. In order to alleviate the pain he had become a morphine user and could not abandon the habit. After trying a multitude of drugs he gave him a 1:100 solution of nitro-glycerine, one drop three times a day, gradually increasing the dose to five drops. Relief was almost immediate, and in ten days he could resume his work, completely cured. —*Lancet Clinic*

Relation of Tuberculin to the Blood Cells.

As the result of recent experiments, Dr. Maurel finds that tuberculin, in the doses in which it is already employed therapeutically, has no sensible effect upon either white or red blood cells. His experiments also show that human leucocytes are able to resist successfully the bacillus tuberculosis, and that it is only necessary to attenuate the bacillus to a slight degree to enable the leucocytes to destroy the microbe. The experimenter suggests that it is only necessary to discover some agent capable of doing this to cure one of the most dreadful maladies with which the human race is afflicted.—*N. O. Med. and Surg. Jour.*

Treatment of Syphilitic Dyspepsia.

Pasquale de Tullie (*Il Policlinico*), after stating that three-fourths of the population (? of Naples) are infected with syphilis, proceeds to quote a number of recorded post-mortem observations of syphilitic lesions, mainly ulcerative, of the stomach. He points out that in certain cases of syphilis symptoms of gastric dyspepsia are prominent either soon after primary infection or at a later date. He finds that the free gastric acidity and proteolytic power are diminished in these cases. The exhibition of the green iodide of mercury gave excellent results. It had, apparently, not only a general but also a topical action upon the secreting structure of the stomach. The quantity given was about half a grain in divided doses during the day. In some of the cases the patient took as much as thirty grains before recovery was complete.

SURGERY.

Contribution to the Study of the Etiology of Varicocele.

B. S. Talmey, M.D., in the *American Medico-Surgical Bulletin*, is quoted as saying that masturbation is almost always the pathological cause for varicocele. There can scarcely be a greater unnatural irritation of the nerves than that caused by onanism. During such an irritation the testicles being in a secretory condition are supplied with a greater amount of blood, and anything that increases the amount of blood to the testicles is surely a cause for varicocele. Through the continued high pressure the walls of the vein become lax, flabby, and unresisting and the vessels enormously dilated. The elastic and contractile tissue of the venous walls is absorbed and replaced by a low grade of connective or fibrous connective tissue. The same condition as in the spermatic cord in the male is found in the broad ligaments, as the ovarian veins in the female are the analogue of the spermatic veins in the male. That varicocele is frequently formed in women after pregnancies is agreed by most writers on this subject. But the author does not remember having read about a case of varicocele in a virgin such as he once saw in a girl, whom he immediately suspected of masturbation. The sexual organs were all in a normal condition, and yet she complained of a dragging sensation along Poupart's ligament and in the vagina. The broad ligaments were thickened.

Eczema of the Hands in Surgeons.

At the Twenty-third Congress of German Surgeons, according to a report published in the *Gazette Hebdomadaire de Medecine et de Chirurgie*, Dr. Lassar stated that, in his opinion, the eczema of the hands frequently seen in surgeons was produced by antiseptics, which, although they caused cutaneous alterations which were hardly appreciable, were yet sufficient to explain the particular sensibility of the skin. This, he thought, was the reason of the frequency of relapses. As to the treatment, all that was needed to cause the eczema to disappear was to change the antiseptic often. As a preventive, he recommended rubbing the hands, after washing them with soap, with a mixture of equal parts of vaseline, lanolin, olive oil and glycerin. Dr. Rotter recommended an ointment composed of from one to two parts of formol, one hundred parts each of zinc oxide and talc, and two hundred parts of vaseline.—*N. Y. Med. Jour.*

Anesthesia by Cocaine Deprived of its Disadvantages by Trinitrine.

Dr. Gautier (*Wien. Med. Presse*) recommends the addition of trinitrine to solutions of cocaine in order to render anesthesia by this drug innocuous.

Cocaine muriate.....	3 grains
Alcoholic sol. trinitrine.....	10 drops
Distilled water.....	2½ drachms

A hypodermic syringeful of this solution contains one-third grain of cocaine and one drop of the trinitrine solution. He has used this solution for two years without the slightest disadvantage. Thomas, of Marseilles, has employed this same solution in anesthesia of the fauces and larynx. In three cases where a ten per cent. solution caused grave symptons of poisoning this preparation was used with success. In all cases it was well tolerated. His solution was made according to the following formula:

Muriate of cocaine.....	45 grains
Alcoholic sol. trin. (1:100).....	40 drops
Distilled water.....	1 ounce

Local applications to the pharyngeal or laryngeal mucous membrane does not produce the well-known sensation of dryness which is usually observed with the use of cocaine, but an agreeable feeling. Trinitrine does not appear to reduce the anesthetic and vaso-constrictive action of cocaine.—*Lancet Clinic.*

Lesions of the Stomach Simulating Cancer.

In Paris lately, M. Ferrier drew the attention of his colleagues of the Surgical Society to a form of gastric disorder simulating

cancer, which was much ignored in a surgical point of view in France. A woman entered the hospital with gastric trouble, presenting all the symptoms of cancer and coinciding with the existence of an epigastric tumor. M. Ferrier performed laparotomy for exploring purposes, and found the stomach adherent to the walls of the abdomen and to the left lobe of the liver. After breaking down those adhesions, the operator closed the wound, and the patient gradually lost all bad symptoms, and left the hospital quite recovered. In concluding, M. Ferrier said that in many cases, purely inflammatory lesions could simulate cancer, and an exploring operation would put the case in its true light and do no harm to the patient.—*Med. Press and Circular.*

Treatment of Hydrocele.

A letter from France to the *Med. Press and Circular* says that the classical treatment of hydrocele, puncture and injection of tincture of iodine or some other irritating liquid, has been rendered much more simple by a surgeon who has published the result of several cases cured rapidly by the method. He inserts the trocar into the most dependent part of the tumor and removes the liquid; he then injects a five per cent. solution of carbolic acid, which is removed almost immediately. The trocar is introduced a second time into the canula, and pushing it up toward the highest point a counter-opening is made. The trocar is again withdrawn, and a drainage-tube is passed through the canula and left in position, the canula being removed. The patient can immediately get up and walk about. The drain is withdrawn on the fourth day, and in a week the man is cured.

Odd Methods of Syphilitic Inoculation.

Dr. W. Judkins (*Jour. Cutan. and Gen.-Urin. Dis.*) says syphilis is so widespread and contagious that it is rather surprising that it claims no more innocent victims than it does. The author now reports two cases contracted in barber-shops, one from the use of the hair clipper and one from a papular syphilide of the barber's hands.—*St. Louis Clinique.*

BIOLOGY.

Is Biliary Lithiasis of Microbic Origin?

This question was discussed in a paper by A. Gilbert and S. A. Dominci at the last meeting of the Society of Biology. Since Galippe in 1886 showed the presence of micro-organisms in biliary calculi the question has remained in abeyance until taken up by the authors. They have examined calculi from six cases. In two cases in which the lithiasis was of recent date they were able to demonstrate by coloration and culture the presence of organisms in the center of the calculi.

In two cases in which the lithiasis was of ancient date, examination yielded only negative results. In one case in which the lithiasis was of equally ancient date, cultures yielded only negative results, but in colored sections microbic forms were discoverable. In another case where old and recent calculi existed together, the first gave negative results, but the second, on the contrary, gave positive results, both in examination of sections and by cultures. Where culture succeeded, the organisms which developed belonged to the coli-bacillary species. These results are explainable by two hypotheses.

First, it may be assumed that the formation of calculi has preceded their invasion by bacteria, and this hypothesis is the more tenable from the fact that in cases where calculi contained the coli-bacillus the bile was infected with the same germ.

On the other hand, it may be assumed that the infection by the coli-bacillus has formed the initial stage from which this lithiasis has proceeded.

The authors adopt the second of these hypotheses. They have tried to verify the theory of the microbic origin of biliary lithiasis experimentally, and with this object they injected into the gall bladder of three dogs cultures of Eberth's bacillus and into the gall bladder of one dog Escherich's bacillus. Of the animals inoculated with the first-named bacillus the first succumbed at the end of a month with a suppurative cholecystitis and double pneumonia. The second died in three months without lesion of the gall bladder, and with a magnificent (*sic*) vegetating endocarditis of the mitral and tricuspid valves. The third was killed after three months, as also the animal inoculated with the coli-bacillus, but nothing was discovered after death. The experiments, under different conditions, are to be pursued by the authors.—*Med. Press and Circ.*

A New Process to Conserve Fresh Milk.

This new method of preserving milk is original, and, it is said, very effective. Large cylinders are partly filled with the milk, after which oxygen is forced into the cylinders at a pressure of two atmospheres. This procedure entirely sterilizes the milk, which may then remain for months in the cylinders without undergoing any change. It can be sent on long voyages with perfect safety. When it is wished to use the milk the gas is allowed to escape, and the contents of the cylinder are then found to be just as sweet as when first put in.

THE following micro-organisms have been found to be eliminated from the system by the liver through the bile: The bacillus of glanders, the bacillus of typhoid fever, the spirillum of cholera, the bacillus coli commune, the bacillus of anthrax, the staphylococcus pyogenes aureus, the bacillus pyocyaneus, Friedlander's pneumococcus and the bacillus murisepticus.—*American Medico-Surgical Bulletin.*

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ORIGINAL ARTICLES.

INFLAMMATORY DISEASE OF THE UTERUS AND APPENDAGES UNDER VARIOUS MODES OF TREATMENT.

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The methods of treatment of pelvic disease may be broadly classed as those that are proven and those that are experimental. Proven methods have gained their position from the work of earnest, painstaking surgeons who step by step have arrived at conclusions which to them are as irrefutable as any of the laws of physics or mechanics, and from which they are not induced to vary save by the exigencies of a given situation, and then only to graft a new step or unusual procedure on account of some complexity which the case offers. In opposition to these we have the experimental surgeon, who seeks new laurels in the line of new microbes and new ways of killing them after he has discovered them. After this death-dealing agent has been discovered, and with it some new chemical antidote, his next ambition is to invent some new automatic instrument by which all surgery becomes self-regulating. The abdominal wall is stitched up as if by a Wheeler & Wilson, and a new table fitted with a crank and a watch-tower, with red lights and electrical attachment, signals danger, but don't tell them to stop. Of all this what is to come? With the minor steps condemned and the question of the legitimacy of the simple removal of the appendages even questioned, the advance guards of automatic surgery would have us leap the gulf and add to the original operation something to simplify it. What delicate irony! What sophisticated reasoning! Surely the refined metaphysics of the scholastics were not more disconcerting than this—and not less rational.

We must start out on the broad ground that simplicity of work must give us perfection of results; that the less we primarily deal with the less is the restoration to be made, assuming always that we deal always with diseased structures and do all that is necessary for their removal or ultimate recovery. All methods that do not thus aim at completeness must fall under the ban of criticism.

What is the rule with reference to disease anywhere of a suppurative character? The suppuration must either be encouraged to evacuate itself or assisted to an egress. So it is in the liver, the kidney, the brain. So it must be in the pelvis. Any method that loses sight of this principle must also fail in its ultimate efficiency. Herein is the failure of most, if not all, of the so-called conservative methods so loudly heralded. In all suppurative disease there is concurrent inflammation, and the part originally diseased is glued down on some neighboring structure, interfering with its function or with its anatomical relation, causing pain or discomfort, greater or less. It is argued by the conservative camp to take away just as little as possible, leaving adhesions if necessary to simplify the work. This to the thorough surgeon is not permissible. His aim is to remove disease and to bring the parts not diseased into

their normal anatomical relation, and by so doing conduce more certainly to the ultimate well-being of the patient. From this point of view the operation that would remove a diseased tube and leave an ovary bound down by adhesions to the pelvic wall or to the intestine or omentum is not surgery at all; it is only experimental shilly-shally which, if it results well, is no credit to any one.

The same may be said if the method is applied to the conservation of a useless tube because it is hard to remove. To know that these cases may get well if we leave them when we have opened the abdomen to find them, puts our conservative in the light of doing a useless operation, and at once becoming conservative because it is the easiest thing to do. To leave a tube full of pus or blood, simply because it is hard to remove, is like building a bridge till we get into deep water and then completing it with a ferry-boat. The so-called conservatism has no right at the present time to argue from the standpoint of the infancy of abdominal and pelvic surgery, any more than the fogy who stays at home would have a right to justify his fears of travel by citing the dangers of sailboat travel as an argument against the ocean liners of to-day. To say that many ovaries have been removed which ought to have been saved is to say what we all know. Cures by operation have been sought where the procedure was not justifiable. We know that such errors were a part of the pioneer work—accidentally of the best men, designedly of the seekers after notoriety. But this does not answer the surgery of to-day; neither is it a fair accusation nor a plea. It is simply special pleading in the line of popularity. It is a fad which, like electricity, tickles the popular ear, the uncritical eye and the easily satisfied imagination.

The surgery that leaves pus tubes and abscesses to get well of themselves and afterward finds pregnancy occurring is so fabulous, mythical and mystical that I prefer simply to wonder without caring to understand or believe. If we are to have miracles and magicians with wonder-working tricks, let us swallow them whole, not try to digest, but lie stupid till they have worked their way through.

What I have here referred to incidentally leads to a broader reference to pelvic pathology. To understand the limitations of conservatism, especially as applied to subsequent conception, it is necessary to consider the complexity of the pathological processes which militate against every chance of the organs regaining their physiological function. Pus tubes are not simple. It is the rule to find them with multiple constrictions and with the tube simply a wire line, its lumen a wreck. The history of the changes leading to this condition of things is often of the utmost importance in diagnosis. The earlier, non-operative period when the clinical and post-mortem conditions which were carefully noted, as in the researches of Bernutz and Goupil, have put us on the correct line of investigation and have taught us what to look for, where to look and how to distinguish necessary operative conditions. Studies in intestinal surgery and in the general physiology and anatomy of the intestinal tract are necessary for correct performance of this work, and the more general success of all sorts of abdominal operations at the present day is secondarily due to the wisdom of accrued experience and to the advances made in intestinal surgery with which pelvic surgery has so much in common.

Many of the operations now successful were formerly failures because of the insufficient knowledge of how to deal with wounded gut, how to make an anastomosis or to do a bowel resection. Hence it is to be put down as a postulate that no man has a right to attempt pelvic surgery who does not know how to deal with all the complexities of intestinal surgery. To know when to stitch and when not to stitch intestine is as necessary as to know when to operate and when not to. Incomplete work, here as in all other divisions of the art, is fatal to good results. A fecal fistula is often the result of careless handling or of inexcusable carelessness in passing over a bowel lesion. That we may tear an intestine is no reason for leaving an adhesion which may afterward cause bowel obstruction, and it is an undisputed fact that many of the bad after-results are due to carelessness in this respect alone.

The leaving of pus tubes to recover of themselves is just one step removed to stuffing them with gauze and trusting to Providence. To puncture, evacuate and stitch a suppurating cyst, say a real ovarian cyst, would be derided out of

sight, and yet we now have a set of operators who do not hesitate to do this with the smaller pus tube, smiling as they exercise the prudence which is the better part of their valor. I do not hesitate to say, and to say positively, that the men who descend to this sort of work are those who in their earlier history have been guilty of extreme rashness and now are hiding behind extreme prudence—so called. Take them one by one and look into their work, and you will find something in it that is frightening them now. All the so-called operations for room and light point to confidence insufficient to trust to a cultivated tactile sense. The removal of the sacrum for an ovariotomy or pelvic operation is no more justifiable or necessary than the resection of a rib for a simple pleurisy. Extreme resorts are in general the expedients of BAD SURGERY, which has lost its delicacy and seeks to take the disease by storm.

I cannot refrain from here paying my compliments to the Trendelenburg position in this connection, and saying that I find it just as useless in all abdominal surgery as it is for the operation of suprapubic cystotomy for which it was invented.

The various modes of treatment that have been suggested are scarcely to be noticed. They must stand or fall by their results. It is fair to assume where great results have been claimed, but the means have been problematical, that the disease was slight or imaginary; and so where some mechanical procedure, such as the Trendelenburg position, is said to have simplified and rendered easy all the difficulties of pelvic surgery, I must allow those to believe it who find the need of it, and say "*Credat judaeus apelles non ego.*" I put it down that the long incision and elevated position are not necessary, because with a minimum of incision and real surgical care the conditions that presumably demand them do not exist, and the advantages they offer are therefore mythical. I am willing to acknowledge that if a man has india-rubber or frozen fingers he can feel nothing; and that if he is blind and cannot feel he is not fitted for a surgeon; but I confess, moreover, that I am in no position to sympathize with such sufferers.

A word with reference to the assertion that with the Trendelenburg position there is no escape of fluid into the abdominal cavity. If there is a collection of any kind in the tube, not over-distended, and the pavilion is attached to the ovary, it is an easy matter to enucleate the mass without rupture, but if the pavilion is attached deep down on the pelvic wall or to an intestine, what is to become of the discharging fluid? It is very easy to manufacture reasons that will not explain at all in the actual conditions of things. Any operator or set of operators who argue from a condition of affairs different from the above are taking a stand upon insufficient data.

Akin to all these undemonstrated claims are the tentative methods in certain conditions, such as gauze-packing and vaginal puncture for tubal abscess. Now it is a demonstrated fact that gauze does not drain anything but mere fluid matter; the *débris* of any sort whatever remains behind, and in the cheesy conditions which obtain in pus collections, it is a matter of utter impossibility to clean out the cavities by such packing. Then, again, the vaginal puncture is as uncertain as can be any procedure that does not reach to the bottom of the disease. Primarily we do not know the extent of the disease, nor its surroundings, nor its complications, and therefore we cannot drain it certainly by any one given puncture nor by any method save enucleation. After the enucleation is made the general cavity can be drained, and the results are in no wise questionable.

What shall we say as to the removal of the entire uterus in the presence of tubal and ovarian disease? I take it that if all the pathologists who have ever examined uterine structure—which is in great part muscular—were to make a report, there would be a consensus of opinion than an abscess condition of the uterine walls, apart from a broken-down fibroid, is the rarest condition imaginable, save at the cornua, in case of pyosalpinx. The disease here is strictly definable and removable. It is an unjustifiable assumption to assert that the uterus is diseased and is the reason for the failure of cure in certain women whose appendages have been removed. To remove, therefore, an organ which in a great majority of cases is not even remotely diseased is a seeking after means to obviate predicated bad results which could not be otherwise explained. When men are on record as saying that it is impossible to remove tubes and ovaries without leaving some ovarian tissue, do we go very far astray in thinking that they must

also leave diseased structure sufficient to cause trouble or that their methods are otherwise imperfect?

Again, the arguments for this ultra position all come from sources prone to bemoan bad results. It must be remembered also that there is a difference to be noted in the cases from which they would assume their data. The disturbances due to fibroid tumors are developed at a rather late period, while those necessitating the removal of the appendages are of earlier origin. Hence it is nonsense to argue that the condition of the patients should be similar. If the trouble, nervous or otherwise, is no greater in a woman after operation than it would be at the menopause, are we justified in doing a hysterectomy on every woman whose tubes and ovaries are diseased? I think not. To argue that we need not do an entire hysterectomy, but may leave the cervix, is the weak answer of an uncertain position. The cervix, of all parts of the uterine structure, is most prone to malignant degeneration, and this one fact would be the most sensible standpoint from which to argue the total ablation of the uterus in cases in which the operation would otherwise be indefensible.

In conclusion, we are to remember that enough has been done of all kinds of pelvic work to decide the general trend of results; how far they are satisfactory and how far disappointing. The end should justify the means, not in the hands of the disappointed experimentalist, but in those of the careful, painstaking surgeon; one with a conviction and a faith born of experience and care; one who each day balances his accounts with himself, not seeking to escape the onus of a failure by a flight into unknown seas; who gathers himself together, makes no one mistake twice, and evolves a system which is not of dreams but of reality, and which bears a harvest of results which need no explanation nor apology.

TREPHINING IN HEAD INJURY WITH PARALYSIS OF OPPOSITE ARM FOLLOWED BY FUNGUS CEREBRI.*

R. M. HARBIN, M.D., Calhoun, Ga.

Since apparently trivial injuries to the head are so often followed by unfavorable results both immediate and remote, we are led to consider them more carefully with reference to radical treatment, and it is from a study of cases that do not do well that we derive more practical information. Among the immediate dangers of head injuries to be considered are symptoms of compression, paralysis, inflammation of brain substance and abscess, and among the remote dangers are atrophy of muscles, insanity and epilepsy.

I have a case to report, and my reasons for doing so are that it is a typical case of head injury, furnishing a distinct indication for operative interference, and that it is a striking example of the practical value of the applied rules of topographical anatomy of the brain.

W. S., aged twenty-five, whose previous health and family history was good. Was called to see him December 15th in consultation with Dr. J. H. Malone, from whom I obtained the following history. Three days previous the patient in a fight was struck upon the head with the heavy end of a thirty-ounce billiard cue and was carried home in an unconscious condition. His wounds were dressed and he revived to a half-conscious condition in two hours, having vomited a number of times. There were a number of wounds about the scalp, but only one was of any serious consequence, and it was a gash about two inches long, on right side, extending from median line at a point about two inches anterior to middle point between occipital protuberance and root of nose, extending outward and backward. He complained of intense throbbing headache at locality of wound and was very restless and irritable, although able to sit up.

I saw him on third day after injury and found above symptoms aggravated, with his opposite or left arm completely paralyzed, sensation being normal. His pul-

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sating headache made him prefer to sit in an elevated position; pupils were dilated and pulse subnormal, varying from 48 to 60, and temperature normal. A saline purge was given and then bromide and ergot with cold applications. We diagnosed compression of brain probably due to blood-clot on motor tract for arm on brain cortex, since the paralytic symptoms were gradually developed. The above plan of treatment was continued until seventh day, when his symptoms became more profound and he had a rise of temperature. The clot neither showed any signs of absorption nor indicated any tendency to become organized, and we realized that the immediate dangers were from inflammation of brain substance and abscess and the probability of clot increasing its area of compression. And the remote dangers to be considered were from insanity, epilepsy, and atrophy of muscles of left arm. The indication for operative interference being clear, we advised trephining, which was done on the seventh day of injury. The scalp was shaved clean and washed; the fissure of Rolando was indicated by Champonnierre's line. We drew a horizontal line backward from posterior border of malar process of frontal bone on a level with upper and outer angle of orbit. A perpendicular line 1 1-5 inches long was drawn at a point on the horizontal line 2 4-5 inches from posterior border of malar process of frontal bone. These lines were marked with pen and ink and gave us a point C on the scalp. Another point D in the median line was obtained by measuring ¾ inch posterior to middle point between root of nose and lower edge of occipital protuberance. These two points C and D were connected with a straight line, which indicated the fissure of Rolando; a point opposite and anterior to median point of this line indicated the middle third of ascending frontal convolution, and this point was about one inch external to the scalp wound.

The course of white motor fibers in the brain is interesting. The motor fibers for the arm arise from ganglionic cells in the middle third of the ascending frontal convolution on both sides of fissure of Rolando and pass downward (joining white motor fibers for the leg coming from summit of ascending parietal convolution; joining those for the face from lower third of ascending and foot of second frontal convolutions, and joining those from Broca's speech center in foot of third and lower third of ascending frontal convolutions), converging and occupying bend of internal capsule; then passing into crus cerebri occupying its basal middle two-fifths, and then into pons Varolii, the fibers becoming divided and again converging into the medulla. Most of the fibers decussate here and pass down in lateral tracts of spinal cord (the remaining fibers pass down in anterior columns), and then out by anterior roots of spinal nerves, to be distributed to the arm through the brachial plexus.

The scalp was cleaned and the rules of antisepsis and asepsis were rigidly observed. Ether having been administered and a rubber tube passed around the scalp to prevent hemorrhage, a crucial incision, the cross being over the point selected, was made down to the bone, and a fissured fracture was now observed running the entire length of incision almost parallel to the sagittal suture, and there was no depression of bone. The line of fracture passed through the point selected for trephining, and a seven-eighths-inch trephine was set a little in front so that its circumference passed through the fissure. At every few turns of trephine the track was irrigated with a 1:4,000 bichloride solution and carefully cleaned. When the disk of bone was removed, a black clot was seen at the bottom between dura mater and skull and was irrigated with warm boiled water. The clot occupied about three-quarters of area of trephine, extending backward and inward, and was removed by forceps and irrigation. If we had used point first selected we would have come upon the clot centrally. The clot was about one-third inch thick and oblong in shape, its area equaling that of a silver dollar. The edges of bone were made smooth and hemorrhage checked by hot boiled water in twenty minutes. The finger was passed under the skull, but no spiculæ of bone could be found, and it was not deemed necessary to open dura mater. The wound was closed with catgut and dressed antiseptically. After the operation the patient was put to bed and given hypodermically morphine ⅛ grain, and atropia $\frac{1}{100}$ grain, from which he rested well that night. A saline purge was given next day and morphine again

on second night; after that bromide was sufficient to secure rest. Head was kept elevated, a light diet allowed, and on second day he was permitted to sit up some. Slight motion in arm returned before end of twenty-four hours and was confined to flexion and extension at elbow and shoulder joints, which proved that pressure had been removed. He now complained of no headache and felt well every way. The highest temperature was 101 3-5°, and pulse 90 on evening of third day, but soon returned to normal.

On January 3d, that is, the fourteenth day since the operation, I noticed a protruding mass pushing apart the edges of the wound while dressing, and readily recognized it to be fungus cerebri, or hernia of the brain. It probably had existed four or five days previous, during which time I had not seen it, as I had intrusted the dressing of the wound to the nurse, who allowed the bandages to become very loose. The patient had walked out of the house and overloaded his stomach, which caused vomiting, but the effect soon passed off. Compression was applied by means of roller bandages and sponges, and the mass was reduced somewhat, but by the twenty-eighth day it began to increase in size again and there were symptoms of brain irritation; headache, frequent and slow pulse, and temperature normal. I cauterized the fungus repeatedly with lunar caustic, but with little effect. The movements of left leg now became impaired, but he could walk alone. On the forty-second day a pocket of pus formed just behind the fungus under the scalp, but was opened and the symptoms improved. But on the forty-seventh day his symptoms again became worse, and he had vomiting and intense headache, pulse small and feeble, and temperature 101.1° F., but his mental faculties were clear. These symptoms continued, and on the fifty-third day there was escape of cerebro-spinal fluid. His mind now became blurred and he was delirious at times, with occasional vomiting, pupils dilated and fungus was now the size of a hen's egg, but somewhat flattened. Paralysis in both arm and leg was now complete. He became unconscious and passed into a coma three days before his death, which occurred on the sixty-fifth day after the operation. An autopsy was refused.

We frequently have such cases of head injury, although the symptoms of all are probably not so well defined. They are apparently not of very serious moment, but after a number of days develop meningitis or abscess, or else are followed later by epilepsy and insanity or permanent paralysis. In this case trephining was positively indicated, although it was followed by fungus cerebri. This complication usually is not to be expected with proper precautionary measures, and the probability of its occurrence does not materially enter into consideration in deciding upon the operation. A peculiarity of this case is the occurrence of this complication where there was a small trephine wound and no apparent injury to the dura mater. The treatment of fungus cerebri is unsatisfactory and most text-books speak of it evasively. As to the treatment of my case, I did not attempt anything radical on account of its medico-legal aspect.

Trephining under the rules of antisepsis and asepsis is not dangerous. Cases nearly always get well where there is no serious brain lesion, and even in extensive brain injury it does not materially add to the danger of the injury. Many cases of head injury are followed by epilepsy and insanity or permanent paralysis that could be prevented by the trephine. I have a case under observation now that I treated five years ago for head injury that was followed by irritative symptoms and three years later developed epileptic convulsions of an obstinate character. The operation would evidently have prevented this.

The practical deductions to be made from this case are:

1. That this patient would almost certainly have died in the first instance had not the clot been removed.

2. That there was a positive indication for trephining.

3. That it furnished a striking example of the practical value of the applied rules of topographical anatomy of the brain.

4. That the prevention of fungus cerebri is more important than the cure, and with proper precaution it is not to be looked for.

5. That the occurrence of fungus cerebriis very unusual in such a small trephine wound without injury to the dura-mater.

A NEW QUESTION IN MEDICAL JURISPRUDENCE—AN ILLUSTRATIVE CASE—MEDICAL EXPERT TESTIMONY—LAWYER'S BROW-BEATING.

JOHN M. CURRIER, M.D., Newport, Vt.

On the 24th day of November, 1893, Isaac Miles, of Greensboro Bend, Vt., disappeared and was never again seen alive. He was last seen in company with James Bow, night watchman at the steam sawmill, and Abner G. Cram, who was hanging around the engine-room of the mill. On April 24, 1894, the body of Miles was found under a pile of boards near the mill, with his skull extensively fractured; one of his malar bones was also fractured. The brain was softened so that a part of it ran out as the head was turned to one side. An autopsy of the body was made by the local physicians under the direction of the Board of Civil Authority. Suspicion at once rested upon Cram and Bow, and they were accordingly arrested upon the charge of murder, had a preliminary hearing before a justice of the peace and were lodged in jail to await trial at the September term of the county court. Cram was found guilty of manslaughter and Bow was set free.

At the trial the defense raised the question: Could the freezing of the brain during the winter cause expansion enough to fracture the skull? Expert testimony was introduced with the view to establish this point sufficiently to throw a doubt in the minds of the jurors. The State, anticipating that this question would be raised, had several physicians summoned to testify against it. In the defense it was claimed that the head was driven into the ground sufficiently far so that the expanding earth would fracture the skull and malar bone by force from without inward. This was a point well enough for the defense to make for the purpose of befogging a jury, but not very logical. If the brain would expand in freezing sufficiently to fracture the skull, the force from within outward would be counterbalanced by the freezing earth from without inward. None of the physicians who testified had ever seen a case of freezing of the brain or ever made an autopsy of one that had been frozen; consequently they could not testify from experience. The usual cross-questioning by the opposing counsel was made with the view solely of making the expert witnesses appear as ignorant and inefficient as possible, instead of eliciting the truth. One question that was asked by the counsel for the State of the medical witness called by the defense that should have been ruled out as an insult was: If a man's head was cut off, would he die? Such questions do no honor to the legal profession and their answers do not detract from the dignity of the medical profession. They must appear to the jurymen as trifling.

Will the brain of man or any animal expand enough from freezing to fracture the skull or cause a separation of the sutures? If a person freezes to death, the external parts of the body are the first to freeze, the internal parts are the last. If there should be a tendency for the brain to expand, the pressure would be from without toward the center and cause the blood to be driven down through the veins into the body; but if the person or animal dies before freezing, then there would be a greater tendency for the brain to expand, because the brain would be filled with blood, but not enough to produce a fracture of the skull. The cavity of the skull in life is a shut sac, and it is impossible to pump the blood out of it without supplying its place with some other liquid.

I have seen the skulls of animals that died in the winter months and were thrown out and exposed to very low temperatures, but none of them was ever fractured by the expansion of the brain.

I will relate one case that came under my observation in the town of Bath, N. H., in February, 1855, that comes directly to the point in this case. I was stopping with my brother one very cold day, when between two and three o'clock in the afternoon a drunken tramp by the name of "Bart" Somers called with a jug of rum. He took another "swig" from the jug and left the house before three o'clock; he went about eighty rods, sat down by the side of the road, took another "swig," according to indications, leaned over and took his "last sleep." The body was not found till the next

day at eleven o'clock in the forenoon. It was frozen so stiff that none of the limbs could be flexed or extended. The thermometer registered not less than 28° below zero during the whole night. The body was thus exposed to that low temperature about twenty hours. An inquest was held by the authorities and a thorough examination of the body was made. There was no fracture of the skull nor separation of the sutures to be found. This case proves conclusively that the freezing of the brain cannot produce a fracture of the skull.

COMMUNICATIONS.

THREE CASES OF ABDOMINAL SECTION FOR TRAUMATISM.

ROBERT G. LE CONTE, M.D., PHILADELPHIA.

These three cases occurred at the Pennsylvania Hospital. The first, C. I., an Italian laborer, aged thirty-five, was brought in by the patrol at 7:30 P.M., August 2, 1893, in a condition of profound shock. He had received four wounds from a thirty-eight-caliber revolver. The first had penetrated the abdomen in the left lumbar region, on a line with the umbilicus; as he turned to run away he received a second in the left side, between the twelfth rib and the crest of the ilium; the third penetrated the back in the left lumbar region, and the fourth passed through the right arm at the upper third. Hypodermics of strychnine and digitalis were given with external heat, etc. When his temperature began to rise he was immediately placed under ether. The abdomen was opened in the median line, and the cavity was found full of blood. Fifteen perforating wounds of the intestine were brought together with fine silk by means of the Lembert suture, and four wounds of the mesentery, in which the bowel was not involved, were stitched together, besides a few nicks in the bowel which had not penetrated to the mucous coat. A hasty examination of the spleen, stomach and liver was made, and as far as I could tell they had not been wounded. As the urine came clear from the catheter it was inferred that the kidneys had not been touched. The abdominal cavity was then flushed out with warm distilled water that had previously been boiled until the fluid ran clear, a glass drain inserted, and the abdomen closed with silkworm-gut sutures, the fascia being brought together with a continuous catgut suture. During the etherization the patient's condition was very bad. and hypodermics of strychnine and digitalis had to be repeatedly given. The operation lasted not quite two hours. At the conclusion his temperature was 97 ° and the pulse was almost imperceptible. The treatment consisted of strychnine, brandy and digitalis by hypodermic, and nothing was given by the mouth. At 3 A.M. the temperature had risen to 101°; pulse 96 and weak; respiration 30. He was delirious and very restless, and he had to be strapped and morphine given. At 10 A.M. his condition had improved. Temperature had fallen to 99°; pulse 110 and stronger; respiration 24, and he was quiet and his mind was clear. During the night the glass drain had been sucked dry every ten or fifteen minutes with a syringe, and the quantity of blood or bloody serum withdrawn amounted to about an ounce an hour. This gradually diminished to half an ounce by morning; urine was passed free from blood.

At 4 P.M. his temperature was 98⅘°, pulse 114 and respiration 22. The abdomen was moderately distended, and there was frequent belching of wind, but no vomiting. No flatus had been passed. Toward evening the temperature began to rise, the pulse became weaker, delirium set in and the patient slowly grew worse until death intervened the next day at noon, thirty-seven hours after operation. The post-mortem examination was made by the coroner's physician, and as I was not present I only have the few notes made by him. Two of the bullets were recovered;

one had entered the liver from behind, passed through it and lodged in one of the short ribs on the right side; the other was found just under the omentum near the stomach. None of the stitches in the intestines had given way and no extra perforations of the bowels were found.

Both of the other cases occurred in colored men, stevedores by occupation, strong and beautifully muscled specimens of manhood. They were admitted on the evening of the 10th of last February. The younger, Alex C., aged twenty-three, was stabbed in the abdomen a little below the umbilicus and about three inches to the right of the median line. The wound was a little over an inch long on the skin surface, and a small piece of omentum was protruding from it. There was very slight shock. The patient was immediately etherized, the abdomen opened in the median line, the omentum withdrawn through the median incision, the protruding portion ligated and cut off. The small intestine and cæcum with part of the ascending colon were next examined and no wounds found. The stab-wound was closed with two silkworm-gut stitches, the peritoneum washed out with warm boiled distilled water, and the abdomen closed without drainage with silkworm-gut sutures, the fascia being brought together with a continuous catgut suture. The next day his temperature rose to 100° and then fell to normal, and he made an uninterrupted recovery. The stitches were removed on the ninth day and the wound was entirely healed.

The elder, Frank W., aged forty, also had a stab-wound in the right upper hypogastric region, about two inches from the median line. He had had free hemorrhage from the wound, as his clothes were partly saturated with blood. The cut on the surface was a little less than an inch long, and after enlarging it slightly my finger readily passed into the abdominal cavity. There was but little shock. The patient was etherized and the abdomen opened in the median line. A quantity of arterial blood immediately presented. The bowel and the omentum were carefully examined and no wounds found. It was then concluded that the deep epigastric artery had been severed, and as I did not think it desirable to enlarge the stab-wound, two deep sutures were passed on either side of it, through the peritoneum, and tied. The stab-wound was then closed with silkworm-gut, the peritoneum washed out, and the abdomen closed in the same manner as in the previous case. As I was not absolutely confident that I had checked all the hemorrhage, and thought it possible I might have overlooked some bleeding point, a glass drain was left in. The tube discharged about f℥ss an hour of bloody serum during the night, and then gradually diminished in quantity. The next day his temperature went up to 101½° for a few hours, but soon fell to normal again. On the 17th, seven days after operation, he developed a mild delirium which was thought to be alcoholic, and he was placed on the ward delirium tremens mixture. This subsided by the 23d. On March 3d he was allowed to get up, the wound being healed, except for a small superficial ulceration, the remains of the tract formed by the tube.

I should like to present the following points for consideration this evening:

1. That the surgeon must assure himself absolutely that the peritoneal cavity has been opened before proceding to operate, either by means of the finger or probe, or the protrusion of some of the abdominal viscera or contents of the viscera. If the wound is so small that this cannot be demonstrated, it must be enlarged with the knife, until it is proved either to have penetrated or not to have penetrated.

2. That as speed is such an important factor in these cases, and that the patient's chances of recovery often diminish proportionately with the length of the operation, I would advocate the median incision in all cases except where the liver has been manifestly injured, because the abdominal cavity can be opened more quickly and more bloodlessly in the median line, and a more thorough search of all the organs can be made in a much shorter time than from any other incision, and also because the wound can be more quickly closed and with less danger of a future hernia resulting.

3. The abdomen having been opened and a number of wounds of the intestines found, I would advise that two surgeons should work at the same time, sewing up these perforations, using the continuous or running Lembert suture as a means of saving time, the rest of the intestines be-

ing covered with hot cloths to prevent shock. Fine twisted silk is the best suture for this purpose, and the needle must be smooth and round, without sharp edges.

4. I would recommend the flushing out the peritoneal cavity with a warm solution as a means of cleansing it from clots, blood, etc., as a means of reducing shock, and also because it allows the intestines to float and to resume as nearly as possible their normal position in the abdominal cavity. This solution should be warm water that had previously been sterilized by boiling, containing seven-tenths of 1 per cent. of salt, as the blood, when freed from its solid constituent, represents most nearly a seven-tenth of 1 per cent. salt solution both in its reaction and specific gravity. It is a well-known fact that two fluids of different density and reaction, when separated by a thin animal membrane, will mingle by osmosis, and that pure water will in such cases abstract the salts from the blood, causing a primary blanching of the membrane, soon followed by a secondary hyperæmia, with injection of its vessels. If the eye be washed with pure water, an injection of the vessels of the conjunctiva will follow, but if a little salt is added to the water, no injection will result. It is easy to conceive that the action of pure water on the conjunctiva would also follow in the case of the peritoneum, and experiments on animals have proved this to be a fact.

5. Unless the operator is certain that he has checked all hemorrhage and that there is nothing more than a slight oozing present, I would recommend the use of a glass drain, believing that the dangers of infection through the tube are much less than from a small collection of bloody serum, a most acceptable medium for any septic material which may not have been removed by the flushing out of the cavity. The drain should not remain in more than thirty-six or forty-eight hours, as in that time lymph has been thrown out from the adjacent peritoneum, gluing the tissues together, so that a perfect tube-tract has been formed, after which the tube is more dangerous than advantageous.

6. That the incision should be closed by passing a set of silkworm-gut sutures entirely through the abdominal wall, from skin to peritoneum, and, before these are tied, stitching together the fascia with a continuous catgut suture. As the fascia is by far the most important structure in the support of the abdominal contents, it is necessary that its edges should be neatly and closely approximated, and for this purpose a moderately thick catgut suture, which is allowed to remain buried in the tissue, gives the best results. The stitches through the abdominal wall will bring the peritoneum together just as well when it is separately sewed, and saves the time that this extra row of sutures would require. For this purpose silkworm-gut is preferable to silk, as it is not irritating and non-absorbent, while silk acts like a drain, carrying the discharges through the whole course of the wound. If these discharges at any time become septic a stitch-abscess results. The stitches should remain in eight or nine days, after which the wound is supported by adhesive straps, and when the patient is allowed to get up, not before the twenty-first day, an abdominal supporter should be worn for several months. If the patient is much beyond middle life the supporter may have to be worn for years.

Lastly, the after-treatment of the patient. As the wounding of the bowel and the necessary handling of that viscus in sewing up the wound and examining it for further perforations causes paralysis of the gut, with its concomitant distention from gases, the after-treatment should be directed toward the relief of this distention and the overcoming of the paralysis, as to my mind there is far more danger of the sutures giving way from this over-distention than there is from any peristaltic action that can be induced. Secondly, paralysis of the gut favors ptomaine absorption, and the sooner this paralysis is overcome and the poisonous substances swept out of the alimentary tract, the greater are the patient's chances of recovery.

I would therefore advocate the use of salts, because they excite peristalsis, relieve the distention, and sweep the ptomaines out of the alimentary tract, besides drying the peritoneal cavity, and thus removing a possible source of septic infection. I believe the exhibition of opium to be strongly contraindicated, as it increases the paralysis of the bowel, allows the tension on the stitches to become very great from over-distention, and favors the absorption of ptomaines. Of

course, there are a certain number of cases where restlessness is marked, and where the dangers of its exhausting the patient are so prominent as to make it the cardinal symptom to combat. In these cases morphine must be given by the hypodermic until quiet is obtained.

To sum up, my treatment would be as follows: Strychnine, brandy and digitalis by the hypodermic, water containing a little salt by the rectum, to quench thirst. Six hours after the operation one-half-grain doses of calomel by the mouth for six consecutive hours, and then drachm-doses of Epsom salts every hour, given in as concentrated a form as possible, until the bowels are moved. No food until the functions of the bowels are well established, and then milk only in small quantities often repeated. I have seen the bowel twice ruptured in the removal of abdominal tumors, owing to its strong adhesion to the growth. In each case it was promptly sewed up, and the removal of the growth proceeded with. The patients were placed on the usual treatment of calomel, followed by salts, and each made an uninterrupted recovery. On talking this over afterward with the operator, he stated that when the adhesions were so strong that it became a question of rupturing the bowel or not removing the tumor, he always chose to rupture the gut, as he had never had any bad results follow, or seen a single symptom which could be attributed to this rupture.

In conclusion, I believe that the three great causes of death in these cases are shock, ptomaine absorption and peritonitis, in the order named, and that the treatment should be successively directed against them.

CASE OF GUNSHOT WOUND OF ABDOMEN AND LUNG.

LEWIS W. STEINBACH, M.D., PHILADELPHIA.

A. H., aged thirty-six years, white, a Philadelphia police sergeant, was admitted to the Polyclinic Hospital August 30, 1894. Twenty minutes previous to admission he had been accidentally shot in the abdomen by a 44-caliber pistol.

His temperature on admission was 98°, pulse 60, respiration 28. He was weak and faint, although externally he had not lost much blood. With the assistance of two officers he had walked from the place of shooting to the hospital, comprising several blocks.

Patient complained of some pain around umbilicus, and was unable to void his urine.

The history obtained from the patient states that he was sitting in a chair, while the person who shot him was standing to his right, the pistol pointing slightly to patient's left. On examining the abdomen a small wound one-quarter inch in diameter was seen two inches below and to the right of the umbilicus.

After cleansing the part a probe was gently inserted into the wound, and it was probed in all directions. The muscles had been torn up in several directions, so that this was not satisfactory, although there seemed to be a track in an upward direction and to the left, which from the history seemed to be the true course which the ball had taken. A small quantity of sterile water was then injected into the wound; but, as it returned, it could not be made out that the abdominal cavity had been entered, although this was what was thought to be the case.

Upon consultation with three of the hospital surgeons it was decided to etherize the patient, follow the upward track, and if the abdominal cavity had been entered, to do a cœliotomy in order to ascertain the extent of injury.

Patient was etherized, and after all antiseptic precautions had been taken, a grooved director was introduced into the wound, and after some little trouble, as the track was irregular, it was laid open to about an inch in extent. Upon pushing the director further it entered the peritoneal cavity. The consensus of opinion was to do a laparotomy. A three-inch incision was made in the median line, and upon opening the peritoneal cavity a considerable quantity of blood escaped through the wound. The intestine was carefully examined, and nine perforations made by the bullet were found. These were principally in the lower part of the jejunum and the

ileum. One was wholly in the mesentery, while the others chiefly lay at junction of it with intestine; and it was from these that the greater part of the blood was oozing. The colon was not perforated.

The various perforations were sutured with Lembert suture, silk being used. After carefully going over the small intestine they were replaced, and the abdominal cavity thoroughly washed with warm sterile water until all blood and clots were removed and the fluid returned clear. A glass drainage-tube was placed in the lower part of the wound, and silkworm-gut sutures introduced, closing the incision. The ordinary antiseptic dressing was applied.

The bullet had not been found, but was thought to have taken an upward course to the right of the spinal column.

The operation was a long one, and it was found necessary to administer strychnia and atropia to combat the shock. Temperature after operation was 99.8°; pulse, 120; respiration, 28.

The patient came out of the ether and seemed to rally; but during the evening his pulse became weak, thready, and very rapid, reaching 156 by 9 P.M. The temperature kept rising slowly and steadily until 3 A.M. it reached 102.4°. About ℥iv. fluid blood and serum was obtained through the drainage-tube. It did not clear, though it lessened in quantity toward morning. It was also noticed that the patient coughed up a small quantity of a dark chocolate-colored fluid. Stimulating treatment was kept up during the night. He complained greatly of thirst, was extremely restless, it being with difficulty he was restrained in bed. But at no time did he complain of pain.

The pulse became weaker and weaker, and at 8:36 o'clock the morning following operation he died. Temperature taken half an hour previous to death registered 105.6°.

An autopsy was held by the coroner, and it was found that the bullet had pursued an upward course after striking the spinal column, passing beneath the diaphragm, rupturing some of the vessels at the root of the right lung, which was engorged with blood. The right pleura was filled with blood. There was also blood in the abdominal cavity, due to rupture of small vessels in liver tissue. The intestines looked ecchymotic in places; but the places that had been sutured showed commencing union. The bullet was not found, but traced to muscles of the back.

CASE OF GUNSHOT WOUND OF LIVER AND LUNG.

THOMAS S. K. MORTON, M.D.,* PHILADELPHIA.

A boy, aged nine and a half years, was admitted to the Pennsylvania Hospital, September 11, 1894, with a history that he had been shot by a 32-caliber revolver at short range but a few moments previously. I saw him almost at once after admission, and found a bullet wound one and a half inches below and half an inch to the left of the ensiform cartilage. He was not especially shocked. Was said to have vomited considerable blood, and complained of great pain in the epigastrium. Abdomen not distended.

Ether was administered and perforation of the abdominal cavity proved by enlarging the bullett wound slightly and passing a probe. Having thus made certain that the peritoneum had been entered, an incision was made in the median line from the ensiform catilage downward for four inches. Upon laying open the peritoneum much fluid blood and some large clots flowed out. It was found that the ball had passed through the right lobe of the liver, two and a half inches behind the anterior margin, then emerged just above the gastro-hepatic omentum, had almost totally destroyed the lobus Spigelii, then had torn a large hole in the lesser omentum, again perforated the peritoneum, struck the first lumbar vertebra, and became lost. Blood welled up in large quantities from the posterior peritoneal opening, mostly venous, but partially arterial. A finger-tip only could be passed into this wound. There was no wound of stomach or intestines. The wound of the right lobe, as well as that of the Spigelian lobe of the liver, was not bleeding. A column of iodoform gauze was carried

* Professor of Surgery in the Philadelphia Polyclinic.

down so as to block the wounds of the lesser omentum and posterior layer of the peritoneum, and at the same time to press upon the mutilated Spigelian lobe and posterior or exit wound of the right lobe of the liver. The packing was continued and brought out through the parietal wound. The wound of entrance into the right lobe was not interfered with. The abdominal wound was now closed around the gauze drain after copious irrigation of the surroundings with hot salt solution. As it was suspected that much blood had gravitated into the pelvic and lower portions of the abdomen, which could not readily be washed out by irrigation from above, it was determined to make a small opening above the pubis for that purpose and to put in a drain-tube. Accordingly a half-inch incision was made just above the symphysis, and much fluid blood and clots were washed out through it by means of a long irrigator tube. A glass drain was carried through this wound down to the bottom of the pelvis, to serve as an index should further hemorrhage take place into the abdomen. But despite all efforts the lad died in a few hours. At the post-mortem examination it was discovered that the ball had passed between the aorta and vena cava, and perforated the right crus of the diaphragm before striking the first lumbar vertebra. In the latter it cut a large groove, and was deflected upward and outward through the pleura and into the substance of the right lung, where it was found imbedded. The lower lobes of this lung were distended by blood, and over a quart in addition filled the pleural sac. No wounds of other viscera were discovered. There was no blood in the abdominal cavity.

Upon careful inquiry after death I ascertained that the reported vomiting of blood had been incorrect; that in reality he had coughed up and not vomited it. No especial examination of the chest was made before operation, and no signs appeared to call attention to that locality. But the bleeding therein was unquestionably the immediate cause of death. Had the ball not wounded the lung I believe the boy would have had a good chance of recovery afforded him by the operation.

TRANSLATIONS.

PATHOLOGIC ANATOMY AND PHYSIOLOGY OF GENERAL PARALYSIS.*

Joffroy (*Le Bulletin Médicale*, June 13, 1894) has presented a recapitulation of the microscopic lesions and of the pathologic physiology of general paralysis. In the one the origin of the disease is stated to be a sclerous encephalitis, the lesions of the vessels and of the interstitial tissue being primordial; the other theory, on the contrary, considers the beginning of the histologic process as residing in an alteration of the gray elements of the brain, the cells and nerve tubes, and the interstitial lesions as secondary, following at a period more or less late.

The microscopic lesions of the disease are as follows. The alterations in the vessels, it is necessary to recognize, hold the first place because of their intensity. There is an accumulation of nuclei around their walls; there also exists a state of repletion of all of the vessels—the arteries, the capillaries and the veins are distended and gorged with blood. In fact, the vessels appear to be more numerous than in the normal state, but Joffroy doubts whether there be an actual multiplication; he attributes their appearance of increase in number to an atrophy of the nervous substance. The volume of the brain being diminished the vessels approach one another, and this results in a change of aspect which may cause an appearance of multiplication. All the writers have noted the multiplication of nodules in the vascular walls. This lesion is not absolutely constant and is ordinarily more marked when the disease is of ancient date. If, on the contrary, the duration has been short, generally very few of the proliferated nodules are to be found. In the old individuals there may also be noted a granulo-fatty degeneration of the small vessels which results from an alteration in their external tunic and especially in their middle

* Translated for THE MEDICAL AND SURGICAL REPORTER by W. A. N. Dorland, M.D.

coat. Mendel, according to whom the cortical vessels play an important *rôle*, has descried in the altered vessels miliary aneurisms, ampullary dilatation. A lesion of great importance consists in an extravasation of leucocytes into the adventitious sheath of the vessels. This diapedesis is constant; it is found in every autopsy of general paralysis, whatever may be the age or form of the disease, whether of long or short duration.

The extravasated leucocytes are normal or granular. At times the lymph spaces are filled not only with white globules, but also with a certain number of red corpuscles. In certain cases may also be seen the gelatinous corpuscles to which Dagonet has recently called attention. These are hyaline balls, grouped in a circle, disposed in rosettes and composed of altered nervous substance. The diapedesis is a fundamental lesion as much from its constancy as from its intensity and its signification. When the disease has been of long duration in certain cases may be noted a thickening of the walls of the vessels, with a modification of appearance which has been described under the name of vitreous degeneration by Meyer, hyaline degeneration by Fischl, Thomas and Holschewnikoff, amyloid degeneration by Tigges, colloid degeneration by Magnan, and waxy degeneration by Lubimoff.

These different forms of degeneration appear when there has been a rapid absorption of the nervous substance, and have also been frequently noted in syringomyelia. The lymph spaces, both perivascular and pericellular, are dilated. The neuroglia presents some important modifications. The most important of these is an increase of its substance in every portion of the brain, as demonstrated by Magnan. The neuroglic cells are increased in volume, some attaining enormous dimensions; they present numerous and larger prolongations and appear to be increased in number; this, however, is due to an atrophy of the nerve tissue between them. Nevertheless a true karyokinesis exists in the proliferated nodules.

Alterations in the Nervous Elements Themselves.—These are constant in the course of general paralysis. In 1884 Tuczek demonstrated the disappearance of the intracortical, transverse, tangential and subcortical fibers of the myelin. This lesion is manifest and may be noted throughout the entire convolutions. It has also been noted in the optic thalami, as has been shown by Lissauer and Zagari, in the geniculate ganglia, the quadrigeminal bodies and in the cerebellum. It is especially in the cortical substance, however, that the disappearance of the tubes is to be noted. Certain authors have noted that this lesion of Tuczek is not restricted exclusively to general paralysis; it is also found in senile dementia and in the neighborhood of cerebral tumors. The lesions of the nervous cellules have been carefully described by Meschede. The lesions of the neuroglic tissue and of the vessels are generally predominant; in certain cases the cerebral cellules are diminished in number and at times exceedingly atrophied. In 1891, in the Congress of Mental Medicine, Joffroy substained the opinion that general paralysis was a parenchymatous encephalitis, and this view has been taken also by Professor Pierret. He considers that the primary cause of the disease resides in heredity or predisposition, while alcoholic, saturnine, syphilitic and puerperal poisonings merely act as accessory causes.

Bone-Marrow in Anæmia.

Dr. Dixon recommends bone-marrow extract in the treatment of anæmia. The red marrow of bone being probably the chief agent in promoting the development of red-blood corpuscles, it seemed feasible to suppose that an extract of this substance, if introduced into the anæmic human organism, might act as a stimulant to the formative process and increase the rate of production of the red corpuscles. As the tissue-forming power in young animals is more active than in older animals, the bones of the former are preferable as a source of marrow extract. (To prepare the extract the heads of the long bones obtained from recently killed animals are broken into pieces and digested in glycerine, with frequent agitation. When the extraction is complete, after several days the extract is filtered off and is ready for use. It is red or reddish-brown in color and is devoid of any unpleasant taste or odor.) It may be given in teaspoonful doses once or twice a day, either out of the spoon or spread between thin pieces of bread. In several cases of pronounced anæmia a marvelous improvement, coincident with an increase of red corpuscles, has been observed under this treatment.

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SATURDAY, NOVEMBER 24, 1894.

EDITORIAL.

MALPRACTICE.

With profit the motto of the great lawyer, David Paul Brown, could be adopted by the medical and surgical profession: "A doctor who knows nothing of law, and a lawyer who knows nothing of medicine, are deficient in essential requisites of their respective professions."

Medical men and surgeons are vitally interested in whatever relates to their liabilities as practitioners. The busy practitioner—and he is generally busy in proportion to his zeal, ability and competency for his work—has little time to devote to the long-drawn-out and very generally confused treatise on medico-legal questions contained in books. The gist of what he wants, what he needs, is, what are his duties and liabilities, where do they begin and where end, what constitutes legal rights, wrongs and remedies as they relate to his profession. It has been too frequent, and yet is, that criminal or civil responsibility for omission or commission has been charged to innocent practitioners.

In a not very distant past so great were the facilities, so strong the encouragement of lawyers who shared in the spoils, to bring suits for malpractice, that able surgeons would not risk this constant menace by the practice of surgery. They would practice medicine but not surgery, for the reason of the dangers attending its practice. They turned in alarm from the risks of having the accumulations of years of labor wrested from them by ruinous litigation. These suits were more frequent in the past than now. A just and enlightened judiciary and a united profession has largely diminished the number of these cases, instituted, as they about always are, from avarice, malice or ignorance.

There are, however, many prosecutions instituted that never find their way into legal reports: they are only locally heard of through newspapers of narrow neighborhood circulation, and only serve to startle practitioners of a limited section with the perils of medical and surgical practice. The charges of learned judges and the decisions of the higher courts have laid

down the underlying principles of these cases with such clearness and emphasis as to do more than merely discourage their institution, even to condemn them in many instances as vexatious and cruelly unjust. The number of these cases will continue to decrease with the advance of medico-legal knowledge in the professions of both law and medicine, and with the maintenance of a high standard of anatomical, physiological and pathological knowledge in the latter profession.

Of the many embarrassments which the physician has to confront in general practice, there is none greater or that so severely tests professional merit and character, that so endangers reputation and to which he is so averse, as being called into the courts, whether of criminal or civil law.

There is one fact of easy recognition. That is, that more is expected of physicians—that they are more subjected to indiscriminate, ill-considered and unsparing criticism than any other class of men. When errors or mistakes are made they are noised abroad, passed from neighbor to neighbor, from one acquaintance to another, and not infrequently heralded through the newspapers. The attempt is often to hold them legally liable for what no human skill could avoid or human foresight anticipate. Nothing is allowed for the complex character of the trouble with which they have to deal, the hidden influences which baffle the best science.

Latent conditions often give the most skillful of surgeons bad results. For these he is sometimes carried into vexatious and expensive litigation through the counsel of some unscrupulous lawyer ignorant of the principles governing malpractice cases.

Medicine and surgery have emerged from many forms of barbarism and superstition, and so have the law courts from barbarous rulings and decisions in malpractice cases. The real, inherent difficulties of the profession have grown to be better understood by the law courts. It is recognized that there is very much to qualify results in any given case. An eminent authority condenses much truth in the following: "A source of uncertainty in the practical art of medicine is the difficulty we find in applying to new cases the knowledge we have acquired from observation. This application is made upon the principle of either experience or analogy.

"We are said to proceed upon experience when the circumstances in the new case are the same as in those cases from which our knowledge was derived. When the circumstances are not the same, but similar, we proceed upon analogy, and our confidence in the result is weaker than when we proceed on experience. The more numerous the points of resemblance are, the greater is our confidence, because it approaches the more nearly to that which we derive from experience; and the fewer the points of resemblance, the confidence we feel is more and more diminished. When in the practice of medicine we apply to new cases the knowledge acquired from others, which we believe to have been of the same nature, the difficulties are so great that it is doubtful whether in any case we can properly be said to act upon experience, as we do in other departments of science; for we have not the means of determining with certainty that the condition of the disease, the habits of the patient, and all the circumstances that enter into the character of the affection are precisely the same in the two cases; and if they differ in any one particular, we cannot be said to act from experience but from analogy. The difficulties and sources of uncertainties that meet us at every stage of such investigations are, in fact, so great and numerous that those who have had the most extensive opportunities of observation will be the first to acknowledge that our pre-

tended experience must, in general, sink into analogy, and even our analogy too often into conjecture."

As these difficulties and embarrassments grow to be better understood by courts and by jurymen who come from the body of our communities, the fewer will be malpractice suits, and the more frequent the verdict "not guilty."

The rigid enforcement of the old rule that the practitioner must apply, without mistake, what is settled in the profession, was, up to a very recent date, a fruitful source of suits for malpractice. This rule has been greatly modified under the light of the best modern judicial authorities. Progress in modern medicine and surgery has pushed aside many old practices as useless and in many instances injurious. Especially is there allowed greater room for difference of opinion in the exercise of the art of surgery, for there are usually several ways for doing the same thing, different operations for the same injuries, each operator having a partiality for his own methods, those by which he has secured the best results.

One of the best legal authorities on the law of malpractice very aptly says: "It is not enough for a surgeon to plead that his treatment was that taught him by the ablest members of the profession and the best schools twenty-five years ago, because in a science that is advancing with the rapidity of medicine and surgery—that is, by observation and experience, yearly, and almost daily, correcting errors in practice and abandoning hoary-headed theories, the fallacy of which has become apparent, upon which the practice has heretofore been based—that is receiving auxiliary agencies from all the rapidly advancing sister sciences—there will be new facilities afforded in practice year by year and errors constantly exploded. The authority, therefore, that was at a previous day considered good, and upon which the courts acted, may not at this time be admitted as the present standard of knowledge required of the physician and surgeon. Old physicians and surgeons cannot, therefore, rely with safety upon their elementary education and what they may have learned in practice. It is absolutely important for the protection of the patient as well as of the surgeon, if he assumes the responsibilty of performing an operation fraught with so great interest, that he should make use of every reasonable means of knowing what is considered the best treatment at the time of the operation—not what would have been the proper course twenty years ago. A medical man cannot, with any safety or propriety, practice year after year without keeping himself informed as to the improvements of his science, especially if he practice surgery."

The responsibilities and liabilities of the profession are not in any strict sense diminishing; they broaden with the light and advance of the profession. The law keeps pace in its requirements.

Responsibility is measured by the professed ability to accomplish. Where a large price is demanded and paid for services, there is a corresponding increase of responsibility, there being an implied claim of superiority of knowledge and skill over others. And this responsibility is only reduced or relieved by the operation of causes or influences beyond the physician's or surgeon's detection, or over which he has no control.

Penal laws are made to protect society against the charlatan and the ignorance of the quack. For an educated, reputable and honorable physician to compromise such cases is an implied consent to be classed with those professional pests; is to compromise personal honor and the honor of the profession. Our judicial tribunals will do no more than that which every educated and honorable physician and surgeon will demand, that the severest judgment of the law should be inflicted upon

those who ignorantly or recklessly trifle with health and human life.

Every detail of professional conduct, upon which is founded the good name and repute of the physician and surgeon, receives the severest of judicial scrutiny in all malpractice suits. And there is accountability in damages, measurable with the extent of the evil results, for ignorant, careless or unprofessional conduct. One of the ablest of English surgeons says: "Genius for our art may shine out on great occasions, and brilliant devices contend against remarkable deviations from health, but *conduct* is *required* of us all. The word *conduct* has a wide interpretation; it appeals to the application of the humanities of life, as well as the exercise of skill and industry in the application of our best resources in the treatment of disease."

The law regards the undertaking to be only for the use of proper means. It is not regarded that the cure is in the physician, but is largely dependent upon the constitution of the patient and the influences of causes beyond his control. In one of the oldest reported English cases (1767) the Lord Chief Justice said: "Ignorance is rashness. A physician may intend well and yet his conduct be so exceptional that he must be held liable criminally when life is lost by such conduct, though he did not intend it at the time."

Though extraordinary skill is not required when the act to be done depends on the skill of the operator alone, the law will imply an engagement to use that skill and to produce the desired result, from the employment of one professing it and holding himself out to the world as having it. The errors for which he may be held liable may be either of omission or commission. He is not responsible for those disasters which are not the result of his own conduct, or for those the result of the refractory conduct of the patient, upon whom rests the collateral duties of submitting to the requirements of his professional attendant.

He is liable for any unnecessary pain or delay occasioned by the application of unskillful and improper remedies. Amputations, fractures and dislocations, and deformities arising therefrom, are made the grounds of many malpractice suits.

In the cases of amputation a legal text writer puts the subject in strong form: Under this state of things one of the most difficult and close questions of surgery arises—a question upon the solution of which depends the life of the patient, perhaps, and possibly the reputation of the surgeon—to decide which question correctly calls into requisition correct logic, close observation and extensive surgical knowledge; and that is the question of *amputation*. In these difficult cases the result, let it be for or against amputation, will generally be critically questioned. The loss of a limb, on the one hand, will raise the question of the propriety of the amputation long after the real condition that was supposed to demand it is forgotten by all, perhaps, except the surgeon himself. If amputation is overruled and the patient dies, the surgeon is blamed for the sad result. These cases are fruitful sources of litigation. If the limb was amputated, it is said there was gross carelessness or recklessness and a want of care and skill—that the limb might have been saved had proper effort been made at the right time. If the surgeon gives to the patient the benefit of a doubt as to the propriety of amputation in a close case, and after long and vigilant watching surmounts great difficulties, saves the limb in a condition to be of great use to the patient, yet, it not being a perfect cure, then the surgeon is said still to be at fault, notwithstanding the injury was so severe that the question of amputation hung evenly in the balance for a time, and he is sued.

Such cases are familiar to the profession.

ABSTRACTS.

THE FATE OF THIERSCH SKIN GRAFTS.

Goldmann (*Beitrage zur klinischen Chirurgie*) says that when a wound has been successfully grafted after the manner of Thiersch, healing occurs without the formation of granulations and with scarcely any cicatricial contraction. After a few months the new skin is reddish and somewhat glistening; it is on the same level as the surrounding skin; it is more or less movable on its bed and frequently possesses both tactile and thermal sensibility. When the changes in the grafts are examined in detail, it is found that in the first instance there is some desquamation of the horny layer, while at the same time there is active proliferation in the middle layers of the epidermis; ultimately the epithelium as a whole is thin and the papillæ are of small size. An entirely new vascular network is formed beneath the epidermis which nourishes the latter and persists for years, which accounts for the redder tinge of the new epidermis and differentiates it from the surrounding skin. The grafted skin reaches the level of the surrounding skin surface more rapidly when the grafts are placed on a vascular bed; in the forehead this level has been attained in four to six weeks. It fails to attain this level when the grafts are placed on a granulating surface, as in the latter case there will be cicatricial tissue beneath the new skin. After an interval of months the mobility of the grafted skin is so developed that it can be lifted up in folds from the tissues beneath. Return of sensibility occurs sooner at the margins than at the center of the grafted area, and where large gaps have been filled up it may not return at all.

In discussing the anatomical basis of these clinical facts, the writer points out that the normal mobility of the skin on the subjacent tissues depends on the network of elastic fibers which connect the former with the latter. By adopting a special stain for the elastic fibers, he was able to prove that these were abundantly formed in the true skin beneath the grafts, and that they were prolonged right up to and into the papillæ, so as to end immediately beneath the epidermis. The presence of the new elastic fibers, derived from the mother skin, gives the grafted skin greater resisting power, so that it is able to withstand traction and pressure. Inasmuch as granulating and cicatricial processes hinder or prevent this growth of elastic fibers into the graft, we are able to understand why the results obtained are so much better when the grafts are placed on a recent wound than on one which is granulating. It is also to be noted that the development of the elastic network explains the absence of cicatricial shrinking of the transplanted skin. The new vessels which are formed from the mother tissue have a great influence in raising the grafted area to the level of the surrounding skin. In this they are assisted by the formation of elastic fibers and of young connective tissue. In a successful case there is no scar tissue to be seen. The return of sensibility to touch, pain and temperature is explained by the formation of new medullated nerve fibers, which are probably also derived from the mother tissue and which the author has traced into the grafted skin. This method of grafting succeeds at all ages to an equal degree.

Rational Treatment of Appendicitis.

Ashton (Denver *Medical Times*) holds that it is impossible, with our present means and methods of diagnosis, to know the nature of the pathological changes taking place during the course of an attack of appendicitis.

That all forms of appendicitis are dangerous to life, as it has been demonstrated that germs pass through the walls of the appendix without the presence of either ulceration or perforation.

That surgical interference is indicated in primary and secondary attacks of appendicitis so soon as the diagnosis is clear.

That surgical interference is not advised during an acute attack of appendicitis, except when grave symptoms intervene, unless a competent surgeon is at hand. Under these circumstances the case should be operated upon after the so-called recovery.

PATHOLOGICAL FICTION.

Among physicians "The Heavenly Twins" is looked upon not as a literary venture to be judged by artistic standards, but as a readable presentation of symptoms which suggest definite pathological condition.

"Ships That Pass in the Night" is admirable as a pulmonary record, and "The Yellow Aster" affords an insight into the psychic phenomena resulting from neglect of natural instincts and desires which, surviving the appropriate period of life, subsequently assert themselves in the form of belated maternal love and *ex post facto* philoprogenitiveness.

As to Miss Harraden's book, while we find it useful in the profession for its glimpses into refined sick-room conversation and pulmonary persiflage, we regret, from a medical point of view, that after giving such a careful history of the heroine's case, the author permitted her to be killed by an omnibus. It is humiliating, after following attentively the course of the disease and the method of treatment, to be told that an omnibus was the cause of death and to be dismissed without hearing the result of the autopsy. Moreover, we found her style so delightful that we would have gladly followed the hero to the last hemorrhage, but that, too, was denied us.

Sarah Grand's cases are open to the same objection of incompleteness. She starts out enticingly with such a character, for instance, as Edith's husband, but leaves the later and more interesting phases of his pathological history untold. As a general rule, however, she comes up to the requirement of modern fiction; the cases of most of her characters can be diagnosed; and with a little more clinical experience we have no doubt that her future novels will be above reproach.

There is danger lest in the first stages of the medical movement in literature young writers will attempt to cover too wide a pathological area in their novels and forget the inexorable law of specialism that obtains in the medical profession itself.

To introduce a paretic or ataxic patient in a dermatological novel would not only destroy the unity of the story, but would justly expose the author to a suspicion of a want of thoroughness. If the writer has determined upon appendicitis as his plot he should not waste his energies upon irrelevant diseases in his minor characters. He could gain variety by introducing other forms of enteric disorders, but should never exceed the limits of the abdominal region. Until he has had a thorough medical training, we think the course of a single disease should supply him with all the medico-literary material that he can handle in an intelligent manner. A blow on the head supplied the author of "God's Fool" with all the plot that he needed; Ibsen's "Ghosts" is simply the dramatization of an inherited brain disease, and many a successful short story is based upon a case of simple mania with delusions.—*Amer. Medico-Surg. Bull.*

Acute Lacunar Diphtheria.

Dr. Koplik, of New York (*N. Y. Med. Jour.*), proves that many cases of so-called "lacunar" or "follicular" tonsilitis are in reality diphtheria. He insists upon animal experiments as the only positive proof of the virulence of the Loeffler bacillus. He divides cases into three clinical groups: 1. The course is mild; patients showing little or no disturbance, appetite is good; they are up and about; throat symptoms are absent or only slight; examination shows a general hyperæmia and enlarged tonsils; no membrane is found, but only here and there a yellow spot showing the opening of a follicle; lymph nodes at right angle appear possibly enlarged. Next day the child is apparently as well as ever. Koplik demonstrates the utter fallacy of such assumption of recovery. These apparently harmless plugs are the focus of virulent bacilli, which have been extracted from the same sites up to even three weeks after the alleged recovery. 2. Here the symptoms are distinctly more severe than in group 1, both locally and constitutionally; the children are quite sick, and the general clinical course is like that of the "streptococcus" sore throats; a soft, yellowish fibrinous mass exudes from the lacunæ, though there is no true membrane on the tonsillar surface proper; nodes are enlarged. 3. The cases of the last group show a malignant course from the outset. The lacunar gives way to a more severe type into which the nasal mucous membrane may be drawn.

SOCIETY REPORTS.

THE COLLEGE OF PHYSICIANS OF PHILADELPHIA.

Meeting of October 12, 1894.

Section on General Surgery.

Prof. William S. Forbes, by invitation, exhibited his improved lithotrite and demonstrated the method of testing and measuring the strength of lithotrites, as well as the measured crushing resistance of vesical calculi. He said:

Mr. President and Gentlemen: I appreciate the compliment the Executive Committee of this body has extended to me in inviting me to appear before you this evening and explain the new lithotrite which I placed before the American Surgical Association at Washington in June last. It may be well to commence by stating the origin of this lithotrite. I had five cases of stone in the bladder, which came to me in a group; there was a man of eighty years, a child of three, a boy of seventeen, and two adults between forty-five and fifty. After I had finished crushing the stones and the patients had returned to their homes, I thought of the large number of stones that were relegated to the knife—the large, hard stones—and it occurred to me to attempt to improve the strength of the lithotrite in order that its efficiency might be extended so as to embrace these large and hard stones. This consumed so much of my time that it attracted the attention of my son, who asked me the object of my study. I told him I wanted to improve the instrument so that it would crush the largest and strongest stones in the human bladder, which, by general consent, were now relegated to the knife. He asked me how strong these stones were. I said no one knew. He replied that the crushing resistance of the stones must be known in order to properly design a lithotrite for crushing them. On reflecting upon the problem my son made a machine by which both the crushing resistance of a stone and the strength of the lithotrite could be measured. The result is before you in the apparatus now exhibited.

Upon testing different kinds of lithotrites with this machine we were able to find out all the weak points. The result was an entirely new instrument, which will be explained.

My first experiment was made on a fragment of stone taken from the bladder of a horse, which broke one of the usual form of lithotrites, the septum of male blade giving way. I obtained as may specimens as I could in order to measure the strength of different varieties of stones. My colleagues at the Jefferson College loaned me the collection of stones from that institution, and friends loaned me some—their names are recorded in the table—so that I succeeded in getting together a total of one hundred and eighty-four stones, as follows:

Oxalate of lime	55
Phosphate of lime	64
Uric acid	27
Oxalate and phosphate mixed	15
Uric acid and phosphate mixed	8
Uric acid and oxalate mixed	7
Oxalate, phosphate, and uric acid mixed	4
Combustible, requiring further examination	2
Carbonate of lime and oxalate	1
Cystin	1
Total	184

Attention is called to the large percentage of oxalate of lime calculi in the above table. This is accounted for by the fact that these have been better cared for by their collectors, when stones less rare were lost or not kept.

With regard to the strength of a stone in its different diameters, I found by experiment that for the most part the short diameter of the stone is the strongest. It seems strange that an oval versical calculi should have greater resisting power in its short than in its long axis. Perhaps the arrangement of its superimposed layers would account for this.

The increased resisting power of some specimens is to be noticed. Thus in a smooth oxalate of lime stone weighing 116 grains, it took 162 pounds to break it, or nearly a pound and a half for each grain. (This stone is accompanied by a slip of paper stating that it was taken from a

child eight years of age.) Now compare this stone with another, weighing 915 grains (1 ounce and 435 grains) and taking 406 pounds to crush it. Now, if the strength of this stone had increased with its size and it had taken as many pounds in proportion to crush it as the first stone of 116 grains, it would have required an enormous force (about 1,280 pounds).

The truth is that as a stone increases in volume it does not require as many pounds per unit of weight to break it as a small stone. I wish to state that this second stone, taking 406 pounds to break, and now weighing 1 ounce and 435 grains (915 grains), was taken out by lateral lithotomy in 1853, and weighed at that time 955 grains, showing a loss of forty grains, owing to drying. I make no doubt that in this stone the colloids have hardened like cement, and increased the crushing resistance of the specimen. Since our instrument has broken the hardest of these dried stones, I have no doubt that it will break any to be found in the human bladder.

My son, Mr. John S. Forbes, will explain the testing machine and the construction of the new lithotrite.

Mr. John S. Forbes: This apparatus now exhibited was constructed to hold a lithotrite and measure its strength as well as to measure the crushing resistance of vesical calculi as crushed with a lithotrite. The resistance is shown until it broke and the number of pounds pressure when it broke. The apparatus consists of a rigid frame of wrought-iron pipe, upon which is an adjustable cast-iron bridge. The instrument to be tested is placed in the apparatus, and its handle is firmly grasped by a universal brass clamp. The screw-handle of the lithotrite is held in an independent four-jaw chuck, attached to the end of a rotatable shaft, turning on ball bearings, for reducing friction to a minimum. The shaft has also an end movement of about 1¼ inches. Upon the middle portion of the shaft and between the ball bearings is a flat, grooved brass wheel, so arranged that it may be turned independently of the shaft or locked to it. Secured to the wheel is a cord which passes over an overhead grooved pulley, and is provided at its dependent end with a pan for the reception of weights. The friction due to turning the wheel and its accompanying parts and weight of the pan is eliminated by attaching a small bottle containing shot. The operation of the apparatus is as follows:

A lithotrite is placed in position and its cylindrical handle clamped with the brass clamp on the cast-iron bridge. The screw-handle is secured in the four-jaw chuck on the rotatable shaft, and the whole gotten into perfect line and accord. By locking the instrument and turning the wheel over to the right, the male jaw of the lithotrite is propelled forward, together with the shaft, chuck, and wheel, and by reverse motion the instrument is unlocked and the male jaw may be slid backward or forward, just as the instrument is operated in the hands. Having the instrument thus held, we can measure the resistance of a calculus grasped between the jaws of the lithotrite, and, secondly, we ascertain what pressure may be obtained between the jaws without injury to them or any other part of the lithotrite. A dynamometer is arranged so as to measure progressively the amount of pressure exerted by the jaws of the lithotrite by successive addition of weights in the pan. Knowing the relation or coefficient thus established, the stones to be tested are placed in the lithotrite, and the amount of force required to break them established. Theoretically, the power might be estimated by the following formula: $P = p \times c \times w$, in which P = the pressure between the blades; p = the pitch of the screw in number of turns per inch; c = the circumference, in inches, of the wheel of testing apparatus; w = the weight in the pan of the testing apparatus.

Thus it will be seen that the forces are inversely as the paths.

Now this will give us the theoretical pressure between the jaws, but we must consider the friction in the lithotrite arising from the screw-thread and the tendency of the male blade to buckle. In order to obtain this friction we place a dynamometer or other pressure-recording instrument between the jaws, and apply weights to the pan of the testing apparatus. In this way we will get the coefficient or ratio of friction in the lithotrite to the weight applied for various pressures between the jaws. We can therefore lay out a table of actual frictions for each pressure. The formula must now have the factor of friction introduced, and it may be expressed thus:

$P = (p \times c \times w) - (F\,w)$, where in F = the friction per pound corresponding to the weight w. The dynamometer is now removed and we are ready to measure the crushing resistance of any given calculus. A table of crushing resistance of vesical calculi was obtained in this way. In order to obtain the second and third objects, viz., the pressure which may be obtained between the jaws of the lithotrite without injury to any part of the instrument, and what pressure and where the instrument will first give way, we again make use of the dynamometer and apply weights to the pan of the testing apparatus until something happens, for something is bound to occur if we apply enough weights. The dynamometer ceases to move when this event takes place, and we read the ultimate pressure which the now useless lithotrite was able to record. In this manner the table of the strength of various lithotrites which is before you was obtained.

This new lithotrite somewhat resembles the Civiale, Thomson and Bigelow instruments in general shape, and in having a movable male blade. As regards the mechanism and construction the Forbes instrument is entirely different. In the first place the cross-section of the female blade, of usual construction, the groove is shaped so that when great force is exerted the tendency is to spread apart the sides of the groove, allowing the male blade to rise up. In the new lithotrite the groove has a V-shaped or dove-tailed flange on each side, so that this accident cannot occur. The shank is stronger, the bulk of the metal being put above the slot. The septum of the male blade is unusually thick. The shoe of the female blade is spread so that it will not catch the wall of the bladder, and also to allow the *débris* to come out. The surface of the male jaw presents a median cutting edge beveled to each side, with two cross-ridges on the surface to prevent bursting a stone and injury to the bladder by flying fragments. The spur rises to an unusual height on the male jaw for greater strength. The handle of the instrument is entirely new. The instrument is unlocked by simply turning the handle half a turn to the left, which releases the male blade; it is immediately locked by reversing the motion of the handle. The thread on the screw has the advantage of increasing the power and of giving the stone time to break without unduly straining the instrument.

The handle or screw mechanism belongs to what is known as the interrupted screw type. It consists of an internally screw-threaded barrel having the threads cut away the entire length of the barrel at alternate spaces of ninety degrees each.

This screw-barrel has an end movement in the cylindrical handle of about one-sixteenth of an inch. Working in this barrel is a pair of screw-blocks, likewise having their screw-threads interrupted at alternate spaces of ninety degrees each. Thus the screw-blocks may be slid up and down the barrel without the threads engaging. When it is necessary, however, to apply the power, the screw-blocks are turned by means of the screw-handle, and the threads engage immediately. One screw-block is rigidly keyed to the screw-handle shaft, and the other is so formed that it may have a motion of ninety degrees around the screw-handle shaft. Thus when the screw-handle shaft is turned to the right the screw-block that is rigidly attached to the shaft is brought into mesh with the threads of the screw-barrel, and a further turn of the handle of ninety degrees brings the rotatable screw-block also into mesh. The screw-threads on these two blocks are, therefore, now no longer interrupted, relatively to the barrel, but continuous, and we have in substance a solid plug, or screw-block, engaged with the threads in the screw-barrel. As long as the screw-handle is turned to the right this state of affairs continues, and the male jaw is propelled toward the female jaw. After the calculus is crushed the instrument may again be unlocked and the jaws separated by turning the screw-handle to the left until it stops. This left-hand motion is never more than half a turn. Owing to the sixteenth-inch play of the screw-barrel in the cylindrical handle it readily adjusts itself to engage with the thread of the screw-block, and the calculus is, therefore, never dropped in locking the instrument. The screw-handle has been made larger than heretofore, because it aids the easy and gentle manipulation of the instrument. The shape of the handle is also different, and calculated to serve its purpose. Being made of very thin sheet-metal it is at once strong and as light as the lightest handle

now employed, which is, perhaps, the soda-water-fountain wheel of Thomson or Civiale. I have designed a mechanism which may be placed within the hollow screw-handle, whereby the operator can see what power he is exerting between the jaws of the lithotrite. This mechanism, though it will add a trifle to the weight of the lithotrite, will not increase its size in any part. To sum up this instrument, it may be likened to a chain in which each link is of equal strength, and that means the maximum strength for a given size and weight, or, in other words, a correct disposition of metal.

On testing this instrument it was found that up to six hundred pounds it would not suffer any injury; the blades yielded a little at this point, but regained their original position by the natural elasticity of the metal when the strain was removed. Above this point they did not spring back. The extremity of the jaws were grasping the dynamometer when this occurred. But it was found that this amount of pressure was more than could be obtained by the hand, and therefore this accident would not occur in an operation. Moreover, it was found that the blades closed completely and could be withdrawn from the bladder. The greatest power exerted simply by the hand with this instrument was five hundred and forty pounds. While not sufficient to injure the lithotrite, it is more than sufficient to break any stone occurring in the human bladder.

The screw-thread is large, but is a slow thread. It was found that a stone might resist a pressure for a moment, but then it would break without increasing the force. There is an advantage, therefore, in a slow thread, as it gives the stone time to break, as well as increases the power. There is a great loss of power in friction in all lithotrites. In this instrument the friction is greater, but actual amount of force nearly double that exerted by the ordinary patterns with which it has been tested and compared.

DISCUSSION.

DR. MARTIN: It seems to me that this lithotrite has many points of advantage over all others. The handle is easy to grasp. It is not liable to break. The shape of the jaws makes it not easy to block up. Its chief advantage, however, is the easy way of engaging the stone and of going on to crush by simply turning the handle. The surgeons present should express their gratification and thanks to Mr. Forbes for his ingenuity and skill.

DR. WILLIAM J. TAYLOR: I think the instrument the best I have seen.

DR. G. G. DAVIS: If I understand correctly, the screw of this instrument has a narrower thread and exerts more power than the other instruments. As the pitch of the screw increases the amount of power decreases.

MR. J. S. FORBES: Technically expressed, the fact is generally stated that "the power is inversely as the paths."

DR. DAVIS: My point is this: if the surgeon is able to exert more power with this instrument, then it should be more liable to break than other instruments with which less power can be exerted.

MR. FORBES: The instrument is made stronger than the others.

DR. MARTIN: I would like to ask about the grasping of the smaller fragments. From the shape of the male blade, it strikes me that it would not be so liable to engage the small fragments as the Bigelow instrument.

MR. FORBES: It does the work and crushes the stone and the fragments as indicated by this specimen of uric-acid stone.

DR. WM. S. FORBES: Dr. Martin has asked a very pertinent question to the subject of the discussion. I have used this instrument within the last five months ten times. I broke this stone with the 33 instrument. I did not wish to pulverize any more than to permit the pieces to come through the canula. I only wished to crush so that the fragments would be a little smaller than the canula. Any further crushing is a work of supererogation: the patient is kept longer under ether, the instrument is kept longer in the bladder than is necessary, and the instrument is subjected to additional strain. The object is to get the stone out of the bladder, not that it should necessarily be pulverized.

The object of this instrument is to extend the field of litholapaxy, and at the same time a more convenient and useful modification has been made in the mechanism of the lithotrite. By changing the shape of the jaw and carrying the spur a little higher I have increased the power to grasp large concretions, and by widening the shoe we avoid impaction and, as I have

seen, splitting the penile urethra through its entire extent by a Thomson instrument. I know of such a case, a man, seventy-six years of age; five years later his wounds had not yet healed.

In reply to Dr. Davis, I would call his attention to the increased strength of the septum and of the female blade, as well as its oval form and novel groove, by which a common accident with other instruments is avoided; I mean spreading of the slot and permitting the male blade to escape.

Dr. Le Conte reported

THREE CASES OF ABDOMINAL SECTION FOR TRAUMATISM.

(See page 716.)

Dr. Steinbach reported a case of

GUNSHOT WOUND OF ABDOMEN AND LUNG.

(See page 719.)

Dr. T. S. K. Morton reported a case of

GUNSHOT WOUND OF LIVER AND LUNG.

(See page 720)

DISCUSSION.

DR. EDWARD MARTIN: Aside from other considerations the fact is worthy of note that Drs. Le Conte, Steinbach and Morton have been willing to report cases of cœliotomy for gunshot wound involving the abdominal contents, in which the result was not always favorable. It is certainly the exception to find any but the successful cases reported. Hence the results of a statistical study of this subject are most misleading. Thus in the admirable tabulation of Dr. T. S. K. Morton, published some years ago, the percentage of recovery after surgical intervention was so favorable that the inference as to the duty of every surgeon to operate at once on all these cases was direct. When all the cases operated on in a given section, New York, for instance, were collected, including those which were not published, it was found that the mortality was about the same for the cases treated expectantly, *i.e.*, where operation was performed.

Reclus and Nougues, exploiting their sides of the subject, *i.e.*, conservative treatment, deduced as the result of their statistical study the fact that the mortality after penetrating gunshot wounds of the abdomen is about twenty-five per cent. This is manifestly misleading, the result being due to the fact that only the rare successful cases of conservative treatment are published.

It still remains an open question as to whether a patient with a penetrating gunshot wound of the belly has not a better chance for recovery without operation, unless there should happen to be present a skilled abdominal surgeon armed with all the appliances of his art.

The importance of this consideration of the question rests upon the fact that the country doctor or country surgeon whose experience has been limited, and who is unable to secure the timely help of a specialist, need not feel that in treating penetrating gunshot wounds of the belly conservatively he is unfaithful to his trust.

As to the diagnosis of these cases, *i.e.*, the diagnosis of penetration, unless this is absolutely assured by leakage of feces or gas, for instance, or by bloody vomiting, or by purging of blood, or other pathognomonic symptoms, or by passing of the probe into the abdominal cavity, the fact of penetration should be definitely ascertained by exploratory incision in the line of the bullet wound before proceeding to a formal cœliotomy in the middle line.

The importance of bearing this in mind was well illustrated by a case which I saw in consultation with Dr. Edward Bidwell, of Vineland, N. J. The patient was a very fat woman who had been shot from directly in front with a 32-caliber pistol. The wound of entrance was a quarter of an inch below the level of the umbilicus and two inches to the left. The patient was vomiting, had a rapid pulse, was tympanitic, complained of peritoneal tenderness upon the left side of the abdomen. The probe passed obliquely downward and backward through about three inches of fat and stopped at the muscles. Apparently the case was a fairly clear one of penetration and visceral wound. Exploratory incision along the track of the ball showed that it ranged downward and backward, penetrated the abdominal muscles one and a half inches above Poupart's ligament, grazed the peritoneum, and buried itself in the muscles of the pelvis. The wound was cleaned and closed and the woman was purged. In this case cœliotomy might have proved most unfortunate.

For flushing out the abdominal cavity the normal saline solution is very much better than plain distilled water. The

latter causes a primary blanching and a secondary acute hyperæmia, as shown by repeated experiments on dogs by Dr. Hobart Hare and myself. The normal saline solution is perfectly bland and unirritating.

As to the method of closing the belly wound there is wide diversity of opinion. Perhaps there is a growing tendency to first stitch the peritoneum with a continued silk suture, then complete the closure stitches taken through fascia, muscles and skin. In any event, except for buried sutures, silkworm gut should be used.

DR. G. G. DAVIS: In a gunshot wound of the intestine the ball oftentimes perforates both sides of the wall, and it makes so many openings that, as Dr. Le Conte has pointed out, the most careful examination is necessary in order that none may be overlooked. This takes so long that, in order to save time, in some cases it would be better to resect as does Murphy with his button, in preference to other methods, such as stitching each separate wound and especially circular enterorrhaphy.

DR. JOHN B. ROBERTS: Dr. Martin has spoken of the possible bad results of gunshot wounds of the abdomen, and said that the mortality is not greater in such cases when left to nature with good nursing than when treated by modern surgical methods. Of course it is difficult to decide this, but my own impression is that it is far better to open the abdomen in all penetrating wounds. If the operation be done by modern methods the result is, I believe, much better than can be obtained by expectant treatment. Under the old methods nearly all penetrating wounds of the abdomen caused death. I recall, however, one case of gunshot wound that recovered when such abdominal operations as we now perform were unknown. The patient was treated expectantly and did not die. His recovery, however, was regarded by the surgeon who saw him as very unusual. I, personally, am strongly in favor of section as soon as it is proved that the ball has entered the abdominal cavity. I believe in cutting down upon the bullet track to establish the fact that the missile has entered the abdomen, as was done in Dr. Steinbach's case, and then making an incision in the middle line.

Dr. William J. Taylor reported a case of

FEMORAL EPIPLOCELE IN A WOMAN—RADICAL OPERATION.

I wish to present a specimen of omental hernia, removed to-day with the assistance of Dr. T. S. K. Morton. The history is briefly as follows:

A woman, aged forty-six years, had first noticed a lump in her right groin twelve years ago, but it gave no trouble until about four or five months ago, when it enlarged and became very painful. She was in the country at the time, and went to bed and applied poultices to the swelling. In a few days she was much improved, the pain and swelling relieved, but the mass did not disappear entirely. She came to town, and I saw her first ten days ago. There was a good deal of swelling above Poupart's ligament and in the inguinal canal on the right side. I was in doubt whether it was a new growth or a hernia. With rest in bed and care the amount of inflammatory thickening was very much reduced. To-day I made an incision over the tumor and came down upon a very hard tense sac, which easily dissected away, and I came upon this mass just above the internal inguinal ring. I then opened the sac and drew out the omentum until I came to a healthy portion, and put a ligature around it and removed this mass. The sac was dissected free from the adhesion and ligated with silk. The whole mass showed evidence of long-standing inflammation. When I came close to the abdominal ring I discovered that it was a femoral hernia. I drew the edges of the canal together with two sutures, without injury to the artery; during the operation only one small vessel required ligation. The specimen presented is the mass of omentum, which is glued together by inflammatory adhesion and a portion of the sac.

Pregnancy at Fifty-nine.

Dr. Depasse reports that he was called to an aged-looking woman with white hair, supposed to be suffering from a large uterine fibroid, whom a careful examination proved to be pregnant. She was confined of a boy at full term and was able to nurse him. She weaned him on her sixtieth birthday. She was a widow with a forty-year-old married daughter.

CURRENT LITERATURE REVIEWED.

IN CHARGE OF ELLISON J. MORRIS, M.D., AND SAMUEL M. WILSON, M.D.

THE AMERICAN JOURNAL OF THE MEDICAL SCIENCES

for November. Dr. Charles K. Mills, Professor of Mental Diseases and of Medical Jurisprudence in the University of Pennsylvania, etc., contributes a paper entitled

The Relations of Infectious Processes to Mental Disease,

in which he states that conclusions may be drawn as follows:

1. Specific infection must be included among the causes of mental symptoms and diseases which precede, accompany, or follow febrile and other infectious disorders.

2 Much negative evidence can be adduced in favor of acute delirium or acute mania being due to toxæmia—such evidence as is afforded by autopsies which reveal neither gross nor histological change lesions; and in these cases the toxæmia probably overwhelms the patient before the production of meningitis or other disease.

3. Analogies with nervous affections which are known or believed to be of microbic origin—such as multiple neuritis, myelitis and chorea—favor the new view that insanities with similar or related phenomena and lesions are also microbic in origin.

4. The evidence afforded by careful bacteriological investigation of cases of acute insanity is thus far meager, and shows that various micro-organisms may induce the same or similar types of mental disease.

5. The mental disorders of pregnancy and the puerperal state are probably, in a considerable proportion of cases, toxæmic, without reference primarily to childbirth; but it cannot be regarded as proved that a bacillus of either eclampsia or puerperal mania is the sole cause of these affections.

The Nature and Treatment of Leprosy

is discussed by R. H. L. Bibb, M.D., of Saltillo, Mexico, the author coming to the following conclusions:

1. That leprosy is a specific disease, due to the presence of the lepra bacilli.

2. That leprosy is influenced by race, climate, soil, food, etc.,,only in so far as these environments tend to enervation on the one hand or to physical well-being on the other.

3. That experiments have not demonstrated leprosy to be inoculable on man or beast.

4. That leprosy is hereditary.

5. That leprosy is contagious, infectious and communicable under conditions not yet understood.

6. That leprosy is both mitigable and curable.

7. That chaulmoogra oil is a drug of unquestionable value in the treatment of leprosy.

8. That leprosy may be completely eradicated from the list of human ills.

J. W. Markoe, M.D., and Samuel W. Lambert, M.D., Attending Physicians to the Society of the Lying-in Hospital of the City of New York, contribute a

Study of Methods of Obstetric Instruction.

After reviewing briefly the history of obstetrics and the various methods of teaching in use in Europe and America, the authors give the following as the outline of an ideal course of obstetrics:

1. Theoretical lectures as given in the United States.

2. Recitation system as practiced in the same.

3. Manikin course as given in France, Germany and very generally in America.

4. Touch course on pregnant women as universally conducted in France and Germany, at present beginning to be used in the United States.

5. Practical work in hospital wards, not limited to simple observations, but each student actually to carry on the labors and their subsequent treatment under rigid supervision.

6. Clinical lecture on the same material as given in France and Germany, and almost absolutely neglected in America.

7. "Polyclinic" or out-patient department as carried on in England and partially introduced into the United States.

The general result to be gained is: First, as thorough a theoretical knowledge as possible by the first three theoretical courses just outlined above. Secondly, the student should receive as complete a practical application of this knowledge as may be by seeing experts conduct confinement cases. Then, by doing the same under expert direction in hospital wards, where every facility for cleanliness and nursing is at hand, his flagrant errors would be corrected and his unskilled hand begin to appreciate minute details. He should finally put in practice in the tenements, but under careful supervision, the principles he will have learned. This object should be accomplished by the four final practical courses of the ideal system already outlined.

The questions involved in any plan for instructing midwives are similar, but infinitely more difficult to answer. The deepest foundations on which to build up a system are absolutely wanting. The first help should and must come from the State. A law compelling midwives to give evidence of some little knowledge to the local boards of health would compel these women to seek an elementary education in midwifery. If the demand should thus be created the proper schools would soon follow. The raising of

the standard of requirements for registration would then become a mere matter of subsequent detail.

The remaining papers in this issue are "A Contribution to the Localization of the Muscular Sense," by Dr. M. Allen Starr and Dr. A. J. McCosh, of New York; "Tuberculosis of the Fallopian Tubes," by Charles B. Penrose, M.D., and H. D. Beyea, M.D., of Philadelphia.

PERISCOPE.

IN CHARGE OF WM. E. PARKE, A.M., M.D.

MEDICINE.

The Cause of Death from Chloroform.

Heart weakness is so generally assumed to be the first warning of danger in chloroform narcosis that during the anesthesia the pulse is more closely watched than the breathing. That chloroform has no direct action on the heart, however, and that it kills by inducing respiratory paralysis, is the conclusion of Surgeon Lieutenant-Colonel Lawrie, as reported in the *British Medical Journal* for July 7th. At a recent meeting of the Royal Medical and Chirurgical Society he contended that the experiments, including those performed under the auspices of the Hyderabad Commission, proved that death from chloroform was due to respiratory failure, and that the practical point to remember during its administration was that the condition of the pulse was quite subsidiary, but that the state of the respiration should be closely watched. Chloroform being an irritant, protoplasm is irritated and destroyed by either its liquid or its vapor. When it is injected into the substance of a muscle, such as the heart or the biceps, motion is arrested in the same manner as it is by hydrochloric acid or any other irritant. He argued that in poisoning from the inhalation of chloroform this irritant action could no more take place in the heart than in the biceps, and hence might be ignored in considering the clinical question of accidental death under this anesthetic. In his experiments with animals, chloroformed blood sent to the heart alone produced no effect whatever, but when it was sent to the brain alone the narcotic acting on the brain centers produced its usual effects. From tracings of the pulse and of the breathing, he demonstrated that chloroform anesthesia without respiratory complication was free from risk.

From much experience with chloroform, Mr. Horsley also was convinced that it was the arrest of respiration which resulted in death, and that in the majority of cases of danger inversion of the patient and artificial respiration would cause recovery. Mr. Gaskell and Mr. Shore agreed that respiration failed first, but held that chloroform had a direct action on the heart also. Dr. Lauder Brunton's experience was that chloroform always paralyzed the respiratory center before enough had been taken to paralyze the heart. A number of the accidental deaths were due, not to the chloroform, but to the operation itself, to asphyxia, or to noxious substances circulating in the blood. Mr. Lawrie concluded by stating that he had found it impossible to teach careless men to administer chloroform safely, and that heart failure might be indirectly produced by stimulation of the vagus through irregular breathing. He had noticed no difference in the effects of chloroform on different races or nationalities. In seven hundred cases of chloroform narcosis the pulse had been carefully watched, but it had given no reliable indications of danger.

On the Use of Sublimed Sulphur as a Local Application in Diphtheria.

C. H. Baumler again calls the attention of the profession to the value of the local use of sulphur in the treatment of diphtheria. He has used it in his hospital practice for many years, and thinks its effects infinitely better than those of any other local application which he has used. He was first induced to use it by the recommendation given to it by Professor von Liebermeister ("Special Pathology and Therapeutics," Leipzig, 1885, vol. i, p. 232), who advises it to be applied abundantly in form of the dry powder to the diseased mucous membrane by means of a soft camel's-hair brush, the application to be repeated every hour or two hours, or only three or four times a day, according to the severity of the case. The action he considers merely a local one, and he thinks its principal field of usefulness will be diphtheria of the fauces, where it can be applied directly and abundantly. He is unable to give at the present a scientific explanation of its action, but an extensive experience of seven years justifies him in placing considerable confidence in its usefulness and recommending it again to the use of others.—*Brit. Med. Jour.*

The Inexorable Facts of Heredity.

"I have drunk whisky every day for thirty five years," remarked a gentleman of sixty, rather proudly, "and I don't see but I have as good a constitution as the average man of my age. I never was drunk in my life." He was telling the truth, but to learn the whole truth you would have to study his children. The oldest, a young lady, had perfect health;

the second, a young man, was of remarkably nervous and excitable temperament, as different from his phlegmatic father as possible; the third, a young lady of seventeen, was epileptic, and always had very poor health. Did the father's whisky-drinking have anything to do with these facts? The instance may be duplicated in almost every community. Think over the families of your acquaintance in which the father has long been a moderate drinker, and observe the facts as to the health of the children. The superintendent of a hospital for children at Berne, Switzerland, has found by careful observation that only 45 per cent. of those whose parents used intoxicating liquors habitually had good constitutions, while 82 per cent. of the children of temperate parents had sound bodies. Of the children of inebriates only 6 per cent. were healthy. Can any man "drink and take the consequences," or must his children take the consequences?—*Quarterly Journal of Inebriety.*

Tincture Adonis Æstivalis, the New Anti-Fat Remedy.

R. Kesseler further reports on his experience on his own person with tincture of adonis æstivalis as a reducer of corpulency. By taking 10 drops three times a day in lithia water for about a month—with certain interruptions made because, as the author states, he was losing flesh too rapidly—he has lost 25 pounds without experiencing any untoward effect whatever.

The experience of the president of the Tennessee Board of Pharmacy with this remedy is also adduced, and is in accordance with the author's: there has been a decided decrease in weight without any uncomfortable symptoms.—*A. M. S. Bull.*

Pathogenesis of Gout and Diabetes.

It is a well-known fact that in certain diseases, such as arthritis, diabetes, hæmophilia, and others, a hereditary tendency is well marked. According to Scherk, this is due to inherited affections of the glandular nerves of secretion. The symptoms of the disease, however, may not assert themselves till after many years, if, as in arthritis and diabetes, on account of the anomalies of secretion, an abnormal quantitative ratio of certain salts in the blood or modifications in the reaction of the medium happen to be present after a certain time. English authors have observed the connection of the two diseases inasmuch as they have called attention to the fact that certain members of one family may suffer from arthritis, others from diabetes. This shows that both are caused by a similar factor, being due to an abnormal function of the glandular nerves of secretion; the quantitative ratios of the salt combinations, which act as carriers of oxygen, will then be modified, the reaction of the medium has become faulty, and, as a consequence, the process of oxidation and reduction will be at a standstill.

It has been shown that in diabetes it is dangerous to narcotize a patient, the danger being probably due to the increase of oxygen. In the treatment of the two diseases, alkaline waters are of great importance, because the process of oxidation in the organism can go on much easier where there is any abundant alkali. Besides the well-known dietary measures, the attention is to be chiefly directed to increasing the amount of oxygen by exercise in fresh air.—*Aerzt. Rundschau.*

Why People Become Deaf.

It has taken the medical world a great many years to discover that loss of hearing is almost invariably caused by some disease of the throat or nose or both. But very recent researches in these fields have demonstrated this fact beyond question, and it is now admitted by the more advanced medical men that, aside from rupture of the ear-drum, there is scarcely a symptom of defective hearing which is not traceable directly to the condition of the nose and throat.

In view of the new discoveries, ear specialists are finding their occupation gone, save as they make their particular branch an assistant in further investigation. It is said, as we have already pointed out, that the use of smelling-salts is one of the most prolific causes of deafness, operating by weakening the olfactory nerves, and through them the auditory system. All strong or pungent odors should be avoided as far as possible, especially those which act upon the secretory processes and, as the popular expression goes, "make the nose run."—*Medical Brief.*

The Significance and Etiology of the Premature Discharge of Meconium.

E. Rossa (*Archiv. f. Gynak.*, Bd. 46, Heft 2) states that it is commonly believed that the escape of meconium before term is a sure sign that the fœtus is in danger of asphyxia, and is therefore an indication for the hastening of delivery. The author's personal investigations have led him to doubt the correctness of this teaching. In a large number of cases the escape of meconium has no significance of the kind generally attached to it. The cause of the phenomenon is simply increased intestinal peristalsis, which may indeed be due to asphyxia, but may also be due to other less well-defined causes. Among these the principal are diseases of the mother, and particularly gastro-intestinal disorders.

Primary Cancer of Fallopian Tube.

Tuffier (*Ann. de Gynec. et d'Obstet.*) describes another example of this disease, only recognized within the last eight or ten years. The patient was aged 55. She had borne two children, the youngest when 25 years old. Menstruation began at 18 and ended at 51, in 1888. In May, 1892, metrorrhagia and hypogastric pains set in. As they continued she entered the Beaujon Hospital and was placed

in Anger's wards in July, 1892. The right iliac fossa was filled with a solid mass, which pushed the uterus forward and fixed it firmly against the symphysis. Retro-uterine hæmatocele, probably due to a new growth, was diagnosed, and abdominal section was performed on July 8, 1892. A mass of the size of a small fœtal head was removed. It consisted of the right Fallopian tube. The uterus and left tube were normal, the left ovary sclero-cystic. The patient was examined five months later; no trace of recurrence or metastasis could be detected. The tube, pear-shaped, was found full of serum and clots. Its walls were thin and it contained a villous tumor. This growth was mounted on a pedicle a centimeter broad, attached to the walls somewhat inferiorly, and to the inner side of the middle of its course. At the point of attachment of the pedicle the tumor substance perforated the tube wall so that a tubercle as big as a pea projected on the outer surface of the tube The villous mass was an epithelioma, allied to cylindroma; the stroma was very young connective tissue.

Labor and Pregnancy Complicated by Bright's Disease.

As a result of the careful study of numerous cases of labor and pregnancy complicated by Bright's disease, Dr. G. E. Herman, Obstetric Physician to the London Hospital, in a report to the London Obstetrical Society, summarizes as follows:

"There are at least two kinds of renal disease of which a pregnant woman may be the subject and to which pregnant women seem specially liable. One of these is a very acute disease, coming on either without any premonitory symptoms or with premonitory symptoms of very short duration—*i.e.*, usually measurable by days. It attacks chiefly primigravidæ. It often causes intra-uterine death of the child. It is attended with extreme diminution in the quantity of urine, and the small quantity of urine passed is greatly deficient in urea, but contains enough albumin to make it solid in boiling. This is the disease which is accompanied with rapidly recurring fits. If the disease runs a favorable course the fits cease, then the urine increases in amount and the percentage of urea in it rises. If the excretion of urea is not re-established the case quickly ends fatally. Such cases seldom if ever pass into chronic Bright's disease.

"The other is a disease which attacks older subjects, chiefly those who have had children before. Its premonitory symptoms are gradual and slow in the outset—*i.e.*, usually measurable by weeks or months. It less often leads to intrauterine death of the child. It is generally accompanied with increase in quantity of urine, with copious loss of albumin, but not so much in proportion to the urine as in the more acute disease, and with diminution in the amount of urea, but not nearly so great a diminution as in the acute disease. In these patients delivery is followed by temporary increased diuresis and by increase in the excretion of urea. When this increase is considerable the patient usually gets well and the albuminuria ceases. When the increase is only slight the albuminuria persists and the case becomes one of chronic Bright's disease. This form of disease is sometimes attended with fits, but generally not. The presence of albuminuric retinitis affects prognosis unfavorably. When the pressure within the abdomen is greater than usual the amount of urine may be diminished; but in such cases the diuresis and the augmented excretion of urea after delivery are proportionately greater. In the acute disease which causes eclampsia, and in the chronic disease when it is associated with excessive intra-abdominal pressure, much of the albumin is paraglobulin. The cases in which the albumin is mainly serum-albumin generally either die or pass into chronic Bright's disease."

The Dangers of the Long Rectal Tube.

The use of the long rectal tube in obstruction of the bowel has never been looked upon with favor by anatomists. Nothing is more difficult than the successful maneuvering of the rectal tube through the turns of the sigmoid flexure. The question of the value and safety of this tube having been asked of the *British Medical Journal*, the matter was referred to Mr. Harrison Cripps, who replied as follows: "Traditions die hard, and notwithstanding the condemnation of the long rectal tube by Brodie, Treves, and many other eminent authors, I still find that in most cases of obstruction the tube has been introduced. Fortunately, these tubes are fairly soft, so that in a capacious rectum, when they impinge and are arrested about opposite the promontory of the sacrum, they simply coil up and do no harm. If stiffer ones are used the patient's life is placed in imminent risk. A patient at St. Bartholomew's Hospital was to be operated on for ruptured perineum. In order to increase the supposed efficacy of the injection, a quart of soap and water, with some ounces of oil, were injected by means of a long tube. The injection never returned. A few hours afterward, owing to the acute symptoms of the patient, I assisted one of my colleagues in opening the abdomen. The soap and water and oil we found below a reduplicated fold in the upper part of the rectum. The patient died. The idea that these tubes can be generally passed into and beyond the sigmoid flexure is a pure delusion, save in the rarest circumstances. As a means of diagnosis, or of treating stricture beyond the reach of the finger, tubes of any kind are absolutely useless. If a stricture is actually present it would be 100 to 1 against the long tube or bougie entering it, for it would almost certainly catch in the cul-de sac generally caused by the invagination of the stricture. If a stricture be not present, the arrest of the bougie by the sacral promontory leads to delusive diagnosis. Brodie, in his lectures, alludes to a case in which a worthy practitioner had spent over 150 hours in dilat-

ing a supposed stricture situated high up. The treatment had extended over a period of a year. Brodie, who was present at the post-mortem examination, found there was no sign of a stricture, the bougie becoming arrested by a curve of the sacrum."

Copper Arsenite in Therapy.

A number of cases are described by Dr. A. Hedlicka in which he employed copper arsenite locally, with almost universal success in the various acute and sub-acute inflammations of the mucous membranes, attended with pain, suffusion, and more or less watery discharge. He found it most efficient in solutions of 1:50,000–100,000. These solutions are easily made by dissolving a 1-100 grain pellet in 1–2 ounces of water; they are applied at intervals rarely longer than an hour (bladder, urethra, and nose), and frequently not longer than from 10–15 minutes.

The remedy is rather indifferent in cases where the discharge is thick or persistent, unless the affected surface be previously thoroughly cleansed.

The duration of the treatment ranged from a few hours to two or three days in mild cases, from several days to three months in severe cases. The author pretends to have never failed; relief being nearly always instantaneous, no other remedies were needed.—*N. Y. Med. Jour.*

Treatment of Peripheral Neuritis.

Professor Leyden believes that in the case of neuritis following acute specific diseases, care during convalescence as to nourishment, rest in bed, and avoidance of over-exertion contribute to prevent its occurrence. "Etiological treatment" (removal of the cause) in neuritis due to alcohol or lead and treatment of the primary malady as in diabetes is of the first importance. There is no specific remedy for multiple neuritis, and treatment by drugs does not play a very important part. Owing to the fact that rheumatism is not infrequently an element in the etiology, salicylate of sodium and other anti-rheumatic drugs had been used, without producing any good results in the majority of cases. Iodide of potassium was of use only now and then, and mercury was of doubtful value. Antipyrin, phenacetin, exalgin, euphorbia, and methylene blue were sometimes of use for the relief of pain, but it was often necessary to resort to morphine, chloral, sulphonal, etc. Strychnine, formerly much used, but lately fallen into the background, deserved to be tried; by increasing the excitability of the affected muscles it favored the return to normal function and nutrition; it ought especially to be resorted to in progressive cases in which the respiratory movements were threatened. Leyden prefers to use it as a subcutaneous injection, gr. 1-70 to gr. 1.20 twice daily. Massage and baths were valuable auxiliaries which were indicated, especially the latter, in the later stages of the disease. General hygienic treatment was of much importance. Rest—as a rule rest in bed—was of the first importance in the early stage; in the later stage, feeding. Finally, in the latest stages of all, moral suasion, rousing the patient's latent energies, was often of great value. Passive movements and encouraging the patient to make active movements were generally attended with better results than massage in this stage. Electricity, formerly used too much, was now used too little, but its usefulness was greatly limited by the fact that in many cases the pain caused was too great to permit the treatment to be continued.—*Berliner Klinische Wochenschrift.*

"Thyroidism," Graves' Disease, and Hysteria.

In a paper read before the Societe Medicale des Hopitaux, M. Beclere pointed out the relationship between "thyroidism," Graves' disease, and hysteria. He had recently treated a woman suffering from myxœdema with sheep's thyroid. She had, through a mistake at the outset of the treatment, taken as much as ninety-two grammes of thyroid gland within a period of eleven days. This excessive dose had been followed by symptoms now recognized as due to "thyroidism"—viz., tachycardia, irregularity of pulse, rise of temperature, insomnia, restlessness, polyuria, glycosuria, albuminuria, and incomplete paralysis, with sensation of heat and sweating. M. Beclere further noted an increased rate of respiration, transient tremor of arms, and exophthalmos. Hence arises the question whether these symptoms, which also characterize Basedow's (Graves') disease, may not be due in that affection to hypersecretion of the thyroid gland. It may be recalled that this was the question taken up by Professor Greenfield in his Bradshaw Lecture last year. Moreover, M. Beclere observed in the course of the treatment that the patient manifested some hysterical symptoms, such as transitory aphasia, monoplegia, and anæsthesia of the right arm; and he asks whether an excessive secretion of thyroid juice may not be one of the provocative agencies of hysteria.—*Lancet.*

Treatment of Precocious Malignant Syphilis.

Fournier (*Brit. Derm. Jour.*) states that the tertiary accidents of syphilis may be met with in any year of the existence of the syphilitic subject dating from the primary chancre. These accidents are most frequent in the course of the third year. Statistics indicate that even the second year is very prolific in tertiary phenomena; indeed, more than any except the third. Even in the first they are often met with, and these constitute syphilis maligna precox. These lesions have special characters; so definite are they sometimes that at a glance the diagnosis of early malignant syphilis may be established. Thus the lesions ulcerate and spread rapidly; they are present in large numbers and disseminated; they necrose deeply and very markedly;

they are particularly rebellious to specific treatment, and are accompanied by a very bad condition of the general health. The local management consists in getting completely rid of pus and scabs, cleaning antiseptically with boric-acid baths, boric vaseline, or boric compresses. When thoroughly antiseptic the limbs should be surrounded with a wet dressing of boric alcohol, and on the superficial ones mercurial plaster, changed daily. Internally, if much prostration and anæmia, Fournier avoids mercury for the time and prescribes tonics. He gives quinine or small doses of iodine in extract of krameria. The food is regulated, milk given to drink, and the urine watched Potassium iodide is administered. Fever and insomnia must be combated. Generally by this treatment alone strength is gained, fever disappears or lessens, and prostration is recovered from; indeed, the ulcers may heal in two or three weeks. When improvement is shown mercury may be tried cautiously.

Treatment of Delirium Tremens.

In the New York *Medical Journal* Bellamy concludes an article as follows:

1. Delirium was controlled with greater rapidity and safety by trional than by other hypnotics.
2. In the majority of cases a marked stimulant effect was observed, possibly on account of the methylic and ethylic elements which enter into the composition of the drug.
3. On account of the low temperature noted in all cases, trional must possess antipyretic properties, thereby simulating its allies of the phenol group.
4. It was always well borne by the stomach, and in one case was rapidly absorbed when administered per rectum.
5. No unpleasant after effects were observed, and in all cases recovery was speedy, with the exception of two.

Bicycle-Riding for Women.

After pointing out certain contraindications, the *New York Journal of Gynecology and Obstetrics* says, editorially: "But there are a certain number of women in this country, even among those long past puberty, who, hard as it is at times to realize it, have never had any pelvic disease whatsoever, and it will be in regard to these that we shall be called upon to answer the question: Is bicycle-riding beneficial for women? We are inclined to think that, under these circumstances, it is. The muscular action is much more regular than in horseback-riding, and the danger of accident, for a good rider, far less. For women past the menopause, with a tendency to excessive flesh, to torpidity of the liver, to constipation and to dyspepsia, it should be of especial benefit. But we fear that in this class of cases, in which it would appear to be most indicated, the power of feminine vanity will ever place a bar to our converting a probable theory into practical experience.

"At all events, there is no other form of exercise within the capacity of the average woman which involves so general a muscular development and glandular action combined with a healthy mental and physical exhilaration."

The Dangerous Anti-Vaccinationists.

One of the most striking testimonies to the mischief that a knot of anti-vaccinationists can do is shown in the experience of Stuttgart, the capital of Wurtemberg, between the years 1864–1869. Stuttgart was the local point from which radiated anti-vaccination influence, and, in consequence, not only many private citizens but the militia of that city were "unprotected." It had a population of 1,760,000 souls less than New York, yet in the five years indicated there were no less than 11,092 cases and 800 deaths. During that time there were 34 cases in the army of the whole country, but not a death; and now that vaccination and revaccination are not only compulsory, but done under a faithful inspection, the German army is the bright, conspicuous example, shining like a beacon, for all the world to follow. If Germany could build an impassible fence between herself and Russia, the whole country would soon show itself completely freed from the pest; but there is always an immigration from Russia into Germany of persons from that land, where the persistence of cholera shows the inability to cope with epidemics.—*Mrs. H. M. Plunkett in the Sanitarian.*

Scleroderma.

Eulenberg (*Wiener medizinische Wochenschrift*) cites several cases of this disease, one of which ran a fatal course in two years and began with symptoms of tabes. Later the diagnosis was trichinosis, due to the swelling of the eyelids and the muscles. Still later the diagnosis was polyneuritis. Errors in diagnosis are especially frequent when the disturbance begins in the proximal ends of the limbs. Then the characteristic signs of the disease, the tense pain, the paresthesia, the cold sensations, etc., are looked upon as signs of a nervous disturbance. In a fully developed diffuse scleroderma, of course, there can be no doubt of the diagnosis. In the beginning of the disease the marked stretching of the skin, the mask-like condition of the features, and the enlargement of the hands and feet are characteristic. The disease is rare, occurring between twenty and fifty-two years in the cases observed. The clinical symptoms are marked by disturbances of sensation. Sometimes there is motor disturbance, but this is seldom. There are many trophic disturbances, however. The face may become atrophied and spots of ulceration occur. In the small joints there may be enlargement of the ends of the bones. The excretion of sweat is sometimes but not always diminished. The general symptoms which occur in the most severe cases are loss of flesh and strength. There are no pathological lesions found in either the cord or the peripheral ganglia or nerves.

Apocynum Cannabinum in Heart Disease.

A. G. Glinski (*Vratch*), after having proved by experiments on cold-blooded and warm-blooded animals that the root of the apocynum cannabinum contains a strong poison which in large doses paralyzes the heart, and when given in small quantities retards and strengthens its beats, decided to take it himself, as he is suffering from hypertrophy of the left ventricle, with intercurrent attacks of dilatation of the organ, mitral murmur, dyspnœa, etc. The dose was 15 drops of the fluid extract three times a day. As he found that all his symptoms disappeared in two days, he gave it also to other patients in the same quantity in cases of palpitation, disturbed compensation, in which strophanthus and adonis vernalis had failed and digitalis seemed contraindicated. He gives a full account of some of his cases, and summarizes his experience in the following conclusions:

1. The action of the root of apocynum cannabinum is similar to that of digitalis without being cumulative.
2. In cases of dilatation the fluid extract rapidly diminishes the area of dullness.
3. It increases the daily amount of urine, stops the palpitation, and promotes the absorption of transudations.
4. With the exception of increased pulsation of the arteries of the head, it has no bad secondary effects. It was used either in the form of a decoction (1 drachm to 8 ounces), three to four tablespoonfuls a day, or tincture (1 in 10), 5 to 10 minims three to four times daily, or fluid extract in doses of 10 minims to half a teaspoonful three times daily.

Night-Sweats—Treatment.

The July number of the Brooklyn *Medical Journal* contains a valuable report on the treatment of night-sweats of pulmonary tuberculosis. Only individual drugs were employed for the purpose named, and while many were subjected to the test during a period of five years of clinical experimentation, but eight proved successful to any practical degree. Among those having more or less therapeutical value were aromatic sulphuric acid, camphoric acid, chloralamid, muscarine, oxide of zinc, atropine, tincture of belladonna and agaricin.

The latter drug, according to the reporter, Dr. Henry Conklin, ranked first, and concerning it he comments as follows:

This was the most successful of all the drugs. It produced most excellent results in young subjects. Under its use the skin remained in a dry condition, without suspicion of any kind of cutaneous activity. It was very successful in cases where, during its use, the sweating had disappeared and had returned after the drug had been discontinued for a time. Repetition did not weaken its power. Of all the remedies, it acted best in the first few administrations. Subsequent ones sometimes failed. It can be used for any length of time and has no disadvantages.

Agaricin was given in pill form, gr. 1-12; one pill at bed-time, or a pill late in the afternoon and a second in four or five hours. This remedy diminished the sweating in one-eighth of the administrations, stopped it in three-fourths, and failed in the remainder.

The Relief of Spasmodic Retention of Urine.

Excessive irritability is one form of interference of the higher centers; the other form is spasmodic retention. Thus when a man wishes to pass water he is anxious, especially if some one else is standing by and waiting, as in a public urinal, to make water in a hurry; the desire to make water quickly prevents him from passing it at all. This form can frequently be relieved by some such plan as that adopted by Boerhaave. He lived before taps were so common as now, and he used to have a screen in his consulting-room behind which was placed a tall footman. When he desired any of his patients to pass water, the footman, at a given signal from him, poured water from a water-bottle into a basin on the floor, so as to imitate the sound of a person passing water, and this at once had the desired effect. If in the out-patients' department you want to get a specimen of water quickly, in order to examine it, the best thing you can do is to turn on a tap, and if that is not sufficient leave the patient to himself and tell him there is no hurry whatever. As a rule, if there is more than two teaspoonfuls of water in the bladder, you are sure to get it by this plan. Sometimes, also, when there is no water running, if the patient only thinks of the sound of running water it will make the bladder act. The introduction into the uninals at railway stations of constantly running water has been of great service to many. Some passengers can now empty their bladder at a railway station who could not have done it before, although it does not occur to them that the constant running of water has anything to do with the evacuation of the bladder; it has, however, a great deal to do with it. Washing the hands with cold water is another help, as also the application of a cold wet sponge or hot water to the perineum; and making the patient sit down in a hot sitz-bath will frequently enable him to pass water into the bath when he could not do it otherwise.—*N. Y. Med Times.*

SURGERY.

Abrasions of the Skin.

Tinct. benzoin comp. is of especial value, according to Dr. J. L. G. Sherrill (*Amer. Therapist*), in abrasions of the skin, in conditions such as chapped hands, lips, fissured nipples, etc. It is also of service in eczema where there is a tendency to cracking. The peculiar benefit to be derived from its use in such conditions lies in the fact that after evaporation the gum forms a thin coating over the abraded surface, in this way protecting it from external influences and also from infection. The surgical use of compound tincture benzoin

should be more widely extended. In case of injury about the hand—whether it be slight incision in which suture would not be necessary, or whether it be excessive laceration and contusion, and especially injuries occurring in the use of machinery—he has found the application of compound tincture benzoin to be especially useful. The manner in which it should be used is as follows: After carefully cleansing the wound, removing all foreign substances, irrigating the wound with an antiseptic solution if there is any chance or indication of infection, and thoroughly checking all hemorrhage, a layer of surgical cotton is placed around the wound. If the injury is about the hand the fingers should, of course, be separated and kept apart by layers of cotton. After cotton is applied the compound tincture benzoin is poured down next the surface of the wound, saturating the cotton immediately surrounding the injured tissues. This drug, after undergoing evaporation, will form a coating with the cotton which will hermetically seal the part, thereby rendering it perfectly aseptic. Benzoin in itself is an antiseptic, although of inconsiderable strength. There will be some slight smarting upon the application of this tincture, which, however, will not seriously inconvenience the patient, and which is due entirely to the fact that it is carried by an alcoholic medium.

New Operation for Removal of Enlarged Cervical Glands.

Dollinger (*Centralbl. f. Chir.*) describes an operation for the subcutaneous extirpation of tuberculous lymph glands in the neck and submaxillary region. The posterior half of the scalp having been shaved and the whole of the scalp and the skin of the affected side of the neck carefully disinfected, an incision is made commencing behind the external ear and carried in a curved line with the convexity backward and downward toward the middle line of the neck behind. The skin and superficial fascia are divided, and the anterior and lower flap is undermined by finger and elevator until the enlarged glands are reached; these, if they have not broken down or contracted firm adhesions with surrounding soft parts, may now be readily detached by the elevator and drawn through the wound. The skin forming the lower flap is so yielding, especially in women and children, that it is possible by this operation, the author asserts, to reach glands situated near the chin, and even those in the supraclavicular region. The wound, when made under strict antiseptic precautions, heals quickly, and the scar is hidden by the new growth of hair.

Saline Fluid Subcutaneously in Collapse.

Dr. Harold Williams reports in the Boston *Medical and Surgical Journal* a case of recovery from profound collapse in cholera morbus by the subcutaneous injection of saline fluid. The case had the usual history. Everything else failing, it was decided to try the salt solution subcutaneously.

For this purpose a reversed aspirator was used, and a quart of the solution, containing fifteen grains sodii bicarbonatis and half a drachm of sodii chloridi at 105°, was slowly injected beneath the skin of the abdomen. The injection of this fluid was followed by immediate improvement. The radial pulse became distinctly evident; the respirations became more rapid and full; the surface of the body warmer. From this time there was progressive improvement, and the patient recovered.

A New Method of Shortening the Tendo-Achillis.

Phocas objects to Willet's method ("St. Barth. Hosp. Rep.," 1886) of excising a portion of the tendon for this purpose, and also to Gibney's, in which the tendon is divided, no portion being excised (*Rev. d'Orthop.*, 1880, pp. 217 and 244).

In both of these methods the sutures include the skin with the tendon. The author contends that it is not sensible to divide, much less resect, a tendon which it is proposed to strengthen, and considers it a forlorn hope to attempt to make the cicatrix perform the function of the tendon. He proposes the following method, and reports a case, but one too recent to be considered a cure.

A median incision five or six centimeters long is made over the tendon, the sheath opened and the tendon carefully denuded. It is then transfixed laterally at the upper end of the wound by a bistoury which is carried down the middle of the tendon by a sawing motion. The posterior flap is cut away above and below. The anterior part of the tendon is thin enough to be folded on itself, and this is now done, the freshened surfaces together, thus shortening it one-half the length of the incision, and the fold stitched together with catgut. The sheath is closed, and the skin also, separately. The foot is then put up in equinus in a fixed dressing.—*Rev. d'Orthop.*

Alcohol in Shock.

Dr. Wood is authority for the statement that "alcohol is probably of no value whatever in shock. Indeed, I am perfectly sure that a large dose of alcohol in shock puts one nail in the coffin of the patient, and if you want your patients to come out of shock you will be very careful in giving them alcohol. Alcohol stimulates the heart but paralyzes rather than stimulates blood-vessels." The theory is, "by its action on the blood-cells it checks oxidation and limits the power of absorbing oxygen and eliminating carbolic-acid gas."—*Omaha Clinic.*

Laminectomy.

Inasmuch as considerable has been written of late touching the operation of laminectomy, and as there is still no reasonable uniformity of opinion, the conclusions of Dr. A. Parkin, surgeon to the Victoria Hospital, Hull, England, based upon six recent cases, may well be put forth:

1. That extension and counter-extension of the spine, however carefully applied, has little or no effect on cases of paraplegia.

2. That, as a rule, laminectomy has an immediate effect on the paralysis when due to

caries of the spine, and that most cases so treated recover entirely from their paralytic symptoms.

3. If the tuberculous focus can be eradicated from the vertebræ there is every prospect of the result being permanent, otherwise relapses may take place, or further tuberculous disease elsewhere.

4. It is possible by means of laminectomy to considerably improve cases of severe deformity from spinal disease.

5. That advanced cases of spinal caries, in which it is probable that a caseous mass exists, may be greatly benefited by laminectomy and the direct treatment of the diseased focus.

6. That the operation itself is not a difficult one, unless there is grave respiratory trouble. It does not interfere with the future stability or mobility of the spinal column; the disease for which such operation is performed may, however, do so.—*Brit. Med. Jour.*

Treatment of Tuberculous Peritonitis.

Guignabert describes a method he employs in the treatment of tuberculous ascites which was first suggested by Rendu. It is most applicable to this particular form of peritonitis. It consists in introducing a fine trocar and canula through the abdominal wall, midway between the umbilicus and anterior superior iliac spine. While the flow is diminishing, a hypodermic syringe is five times charged with camphorated naphthol, and the contents are passed into the abdomen, the canula being made use of for the purpose. The puncture is subsequently closed by means of aseptic wool and gauze. Hereafter the peristaltic action of the intestine serves to distribute the naphthol, which produces insignificant pain for only a few hours. Furthermore, during the first few days the temperature shows an evening rise and the ascites apparently increases, though the fluid subsequently disappears. Ultimately masses of adhesion will be felt, and these gradually diminish. During the operation the strictest antisepsis is required.—*Boston Medical and Surgical Journal.*

DIETETICS.

A New Method of Making Palatable and Digestible Milk.

Dr. Robert T. Edes, of Boston, gives a valuable way of preparing milk where other methods have not proved useful:

A pint of milk is gently warmed. Into it is dropped, very slowly and with constant stirring, about twenty minims of the dilute hydrochloric acid of the United States Pharmacopœia. The milk should be stirred until it cools. In this way a very fine flocculent coagulum is produced, floating in the whey, which is easily accessible to the digestive secretions, while the whole fluid has lost somewhat of the flat and cloying taste which makes it unacceptable to so many. It will be noticed that milk prepared in this way differs from the various "wheys" in the highly important particular that the casein is retained and used, instead of being separated out as a distinct product, while it avoids the bitterness of pancreatinized milk.—*Boston Med. and Surg. Jour.*

DISEASES OF THE NOSE.

The Treatment of Deviation of the Nasal Septum.

The septum may be forced into position without the employment of cutting or lacerating instruments (efficacious mainly when the deviation is confined to the cartilaginous portion of the septum), or prominent portions of the septum may be first removed with a suitable instrument, or the septum may be incised with a knife, or straightened by the employment of pins or by fracturing the septum with comminuting forceps. The writer gives an interesting summing up of the instruments and measures used by different writers for this affection, and describes his own forceps for fracturing the septum. Operation is demanded where there is nasal stenosis or where there is pressure between the deflected portion and other parts of the nasal passage. The first step is to place the septum and turbinated bodies on the concave side of the septum in a normal condition. The septum is to be reduced as far as possible to normal thickness. In the majority of cases incisions with a bistoury on the convex side are necessary before using the redressing forceps. Wounding the mucous membrane on the concave side should be avoided. In many cases a twenty per cent. solution of cocaine will be sufficient to render the operation painless, especially with the use of a little chloroform just at the time of fracturing. The septum is held in position by a plug (made by wrapping wool or cotton around a small metal plate) in the previously obstructed nostril. Before and after the operation the nose is cleansed with a saline solution of 1 to 5,000 bichloride of mercury. The dressing may be left *in situ* four or five days before changing.—*John O. Roe in New York Med. Jour.*

DISEASES OF THE EYE.

Reflex Cough Due to Ear Disease.

Lavrand calls attention to the fact that in many patients affected with ear disease a blunt hook, curette, or speculum, when introduced into the internal auditory meatus, provokes cough, which disappears when the instrument is withdrawn. He has obtained this reflex in twenty-one per cent. of all the patients that he has examined. He states that at times, from disease of the auditory canal, the cough occasionally becomes very distressing and persistent. He cites a case reported by Percy Jakins in which there were all the signs of beginning tuberculosis, such

as cough, exhaustion, night-sweats, occasional delirium, and mucous rales throughout the chest. Both meatuses were plugged up with accumulations of wax, and when these were removed the pulmonary symptoms abated. The reflex cough is explained by the anatomical fact that the auricular branch of the pneumogastric has its origin in the jugular ganglion, or is given off from the trunk of the pneumogastric immediately below that situation, and proceeds by way of the jugular fossa and the Fallopian canal to the posterior part of the external auditory canal. Observation has shown that this cough is produced only by irritation of the postero-inferior wall of the canal near the tympanum, and the reason that all do not suffer with auricular reflex cough when disease is present may be in part due to an anomaly of innervation in that particular individual. The author finds no relation existing between the more or less nervous condition of the patient and the occurrence of this reflex. The cough which is produced has no distinct characteristics; sometimes it is paroxysmal, resembling that of whooping-cough; sometimes explosive, short, harsh, and barking, and, unless there is catarrh of the passages, it is not accompanied by expectoration.—*Journal des Sciences medicales de Lille.*

PATHOLOGY.

Inoculability of Carcinoma into Healthy Parts of the Bodies of Cancer Patients.

Two cases are reported, of which the second is of especial interest. The first case was one of carcinoma of the vagina, which had developed upon that point where the vaginal wall was in contact with the cancerous ulcer of the portio. But the other case, carcinomatosis of the peritoneum, developed subsequent to an ovariotomy. Small cancer nodules occurred in almost all of the suture wounds of the abdominal incision, while the incision itself remained unaffected. The theory of "inoculation recidive," which has been so thoroughly considered by Winter, appears to have received additional support.—*Dr. Sippel in Cent. f. Gynæc.*

ARMY AND NAVY.

CHANGES IN THE U. S. ARMY FROM NOVEMBER 11, 1894, TO NOVEMBER 17, 1894.

By direction of the Secretary of War, the leave of absence granted First Lieut. Francis A. Winter, Assistant Surgeon, in S. O. 71, July 25, 1894, Department of Texas, is extended one month.

By direction of the Secretary of War, the leave of absence granted Captain Eugene L. Swift, Assistant Surgeon, in S. O. 147, October 11, 1894, Department of Dakota, is extended one month.

Leave of absence for one month is granted Captain Benjamin L. Ten Eyck, Assistant Surgeon.

CHANGES IN THE U. S. MARINE HOSPITAL SERVICE FOR THE TEN DAYS ENDING NOVEMBER 15, 1894.

Austin, H. W., Surgeon; to proceed to Boston, Mass., and assume command of service, November 10, 1894.

Irwin, Fairfax, Surgeon; to assume charge of Quarantine Division of the Bureau, November 14, 1894.

McIntosh, W. P., P. A. Surgeon; granted leave of absence for fourteen days, November 9, 1894.

Young, G. B., P. A. Surgeon; granted leave of absence for seven days, November 8, 1894.

Prochazka, Emil, Assistant Surgeon; granted leave of absence for thirty days, November 14, 1894.

NEWS AND MISCELLANY.

Routes and Rates to Winter Resorts.

The B. & O. R. R. Co. has just issued a little booklet giving the routes and rates to various winter resorts in Cuba, Florida, North Carolina, Virginia, New Jersey, Pennsylvania and Georgia. The information is very conveniently arranged and indexed. Copies can be had by inclosing a two-cent stamp to Chas. O. Scull, Gen'l Pass. Agent B & O. R. R., Baltimore, Md.—2t

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ORIGINAL ARTICLES.

A PRACTICAL STUDY OF SERIOUS ABDOMINAL CONTUSIONS, WITH A CLINICAL REPORT OF TWENTY-ONE CASES.*

THOMAS H. MANLY, M.D., New York.

During the past year (1894) a singularly large number of acute abdominal injuries of the non-penetrating variety have come under my care.

Taken as a group, they presented so many varied and unusual features it occurred to me that a short record of these, with a few others included, would supply a text for a brief study of that interesting and highly important subject, "Abdominal Contusions."

It was my intention at first to embrace within the scope of this review, as a preliminary portion, a series of experiments on the lower animal to be *en rapport* with the tendency of the times, and endeavor to support the clinical side by observations derived from pathological conditions deliberately produced.

This no doubt would lend additional interest and value to the subject, but on reflection I was finally convinced that the additional light imparted by this sort of inductional observation would not compensate for the trouble and the necessary amount of cruelty and suffering imposed. For without the infliction of very great force it would be impossible to rupture any part of the digestive tract of the dog, seriously lacerate the solid fixed organs or the large blood-trunks.

And though this were practicable under anæsthesia, as soon as reaction would set in acute peritonitis with agonizing distress must inevitably have followed. Furthermore, as every one knows who has had any experience in experimental abdominal surgery on the dog, his tissues are of a vastly tougher and stronger consistence and their recuperative energy far greater than in man, it is easy to understand that inferences derived from this line of investigation can at best possess but a relative value when applied to analogous vital structures of the human being. For these reasons it was decided to proceed on data derived solely, so to speak, from "human experimentation," from what knowledge could be gathered from numerous cases coming under my own care, which could be observed throughout from the time of injury until recovery or death; and in the latter event followed to the autopsy room, when the injured structures or viscera could be separately examined under the naked eye.

With a view of enhancing the value of these observations and giving them additional practical interest, the columns of several of the most noted authorities in surgery have been examined, and from them are copied their views and opinions as well as cases that have a pertinency to the subject here considered.

As the study of abdominal contusions is a large one, which to deal with by a systematic plan in full detail would carry one to a considerable length, in the present instance an effort will be made to condense and reduce it within such limits as will not cover too much ground and yet permit a fairly full exposition of it.

*Read at the annual meeting of the New York State Medical Association, October 10, 1894.

ANATOMICAL OUTLINE OF THE ANTERO-LATERAL ABDOMINAL WALLS, CAVITY AND CONTENTS.

The anterior abdominal parietes present a convex trapezoid elliptical contour, with an inward slope along their superior and inferior vertical and lateral planes.

If we draw a line from the insertion of the ensiform cartilage above to the symphyses pubis below, we will observe that as the free borders of the alæ thoracis spread outward above a conical outline is presented in the center, the base of which broadens as we descend to the navel, and from below upward the obliquity of the pelvis with the inward inclination of Poupart's ligaments contribute toward an inferior conical terminus, though not so sharply defined as the one above.

Now, if we intersect this vertical line through the center of the abdominal areas by another horizontal, passing through the umbilicus and carried as far back on either side as the inner margin of the erector spinæ muscle and midway between the last floating rib and the crest of the ilium, we will here observe that the lateral terminus on either side takes the form of a cone through the direction in which the outline of the ribs incline and the iliac border broadens as it descends. The transverse or horizontal diameter is slightly greater than the vertical, varying according to the peculiarity of build in certain individuals. Of the three great cavities, the abdominal is least invested by a bony structure. The quadratus lumborum, the psoas muscles, fascia, erector spinæ and lumbar vertebræ contribute a formidable protection from behind; so that concentrated traumatic force cannot often be transmitted posteriorly to the viscera within the peritoneum without serious damage of the lumbar vertebræ or the corda equina being first sustained. The abdomen is practically a large sac, which contains all the essential organs of digestion and excretion, if we exclude the lungs and integuments. This vast pouch is mainly protected and supported anteriorly and laterally by voluntary muscular tissue. The muscles pass in transverse and vertical directions and collectively constitute the "abdominal girth."

The digestive tube, which receives its solids, liquids and gases through the mouth and is drained by way of the rectum, chiefly occupies the abdominal cavity and is most exposed to injuries.

All the solid viscera here are best protected. Normally the greater volume of the liver rests under the shelving dome of the diaphragm, under the ribs on the right side. The spleen rises high under the ribs on the left side and is well protected in health, but the free edge of the liver projects downward in expiration on right or left side, and the spleen only when enlarged. The pancreas is a suspended organ behind the duodenum, resting on the aorta quite out of harm's way, except when such force is applied as first disorganizes the overlying parts.

In the standing attitude the kidney is a freely moving body, rising and falling an inch or more with each respiratory act. This lies behind the peritoneum, imbedded in loose fat on the psoas muscles close to the bodies of the lumbar vertebræ, which though in spite of its protected position, is mostly exposed to trauma of all the solid viscera in the abdominal cavity. Large blood-trunks occupy the posterior abdominal walls, passing on to the lower extremities and from the alimentary canal to the liver. The ureters pass down behind the peritoneum to the bladder; and the thoracic duct which commences on the body of the second lumbar vertebræ and ascends upward through the aortic opening of the diaphragm. The common bile duct courses obliquely downward and inward along the side of the spinal column to enter the duodenum. If we view the lumbar wall as the lower base of support of the inferior abdominal viscera, which it really is in the recumbent position, it is interesting and important to note that it consists of two broad lateral hollows, separated by a prominent ridge of osseous structures, the bodies of the lumbar vertebræ.

PROTECTION AFFORDED THE ABDOMINAL CONTENTS BY THE COSTAL WALLS.

The subdiaphragmatic contents of the abdomen are most effectually protected by the arched domes of the thoracic wings.

It is important to remember that the apex of the diaphragm on the left side rises as high as the sixth intercostal space, or about one inch below the nipple line, and on the right side to a point about one inch lower, and that posteriorly its summit is nearly on a level with the ninth in-

tercostal space. It is therefore apparent that the stomach in the empty state with the liver, spleen and gall-bladder are so sheltered by the lower segment of the thorax that when they are exposed to direct violence its primary impact is first encountered by the ensiform and the costal cartilages, the ribs, pleura and lung.

By this provision in the architecture of the economy, while the pulmonary organs are most exposed, those solid viscera lying under the diaphragm are spared. Hence why we will so often see costal fracture below the sixth intercostal space, with or without pleural or pulmonary complications, when the abdominal contents entirely escape.

The general muscular support of the abdomen is quite equally distributed, and protection is only defective at those points through which the umbilical vessels passed in fœtal life; and over the inguinal and crural planes are rendered defective through the evolution of anatomical development.

MUSCULAR WALL OF ABDOMEN.

The muscles investing the antero-lateral walls of the abdomen are strengthened, enveloped and anchored by powerful fibrous sheaths and a broad, strong tendinous aponeurosis. The muscles are so arranged that they pass downward from the thorax in the center and obliquely laterally.

In the male the abdominal cavity is wholly enveloped by muscles, except in the median line above the umbilicus, where the fibers of the recti diverge. Below the navel in females who have borne many children the internal borders of the recti at the linea alba are so widely separated that support is only maintained by the central aponeurosis. The principal central support of the abdomen is derived from the recti muscles. Each of these muscles is separated from the other by a dense fibrous septum and is enveloped by an investment of the abdominal fascia, which splits in two as it approaches its outer border, and then coalesces as it approaches the linea alba.

Thus the sheath of the abdominal rectus is more powerful and resistant for the volume of the muscle than any other met within the body. The action of the rectus abdominalis when the body is fixed is to actively compress the abdominal viscera (*a*) backward, (*b*) upward, (*c*) downward and (*d*) partly laterally.

When the muscles of the lateral walls act conjointly in contraction, the extent of intra-abdominal displacement is very great, in fact practically pushing the movable viscera up under the diaphragm, downward into the pelvis and backward along the lateral hollows of the spine.

We sometimes see individuals with such command over their abdominal muscles that they can flatten and depress the ventral convexity at will. If we observe the motions of the thorax while this ventral feat is being performed, it will always be noticed that abdominal collapse is simultaneous with a forced and prolonged expiratory act, the lungs rising high under the clavicles while the viscera follow upward the retreating diaphragm.

The oblique and transverse muscles, besides supporting and protecting the abdominal contents when the body is fixed, are capable of maintaining remarkable pressure on them. They are invested externally by a dense fascia, which above is continuous with the thoracic, below blends with Poupart's ligament, laterally with the lumbar fascia and with the linea alba. The coalescence of the external fascia abdominalis with the upper margin of Poupart's ligament is what produces that crease in fat people which runs across the lower side of the abdomen.

It has recently been claimed by a distinguished writer on anatomy that this depressed seam does not correspond with Poupart's ligament and is an unsafe guide in operations; that the ligament may be much lower than it, and the only safe guide to the ligament is by a line drawn from the anterior subspine of the ilium to the pubic symphisis.* But this is clearly an error and capable of misleading one not accustomed to manipulations on the living anatomy. Poupart's ligament rarely deviates in its course, and in all cases the under layer of the integument is more or less adherent to it.

The femoral arcade marks the inferior boundary of the three lateral muscles of the abdominal wall, and passing through their tendinous insertions is the inguinal canal, a portal which, when normally formed by augmentation of abdominal pressure instead of being opened, is all the more compactly closed. The psoas

*Keen in American edition of "Gray's Anatomy."

muscles on the inside, the quadratus lumborum and erector spinæ inclosed in laminæ of the lumbar fascia, covering the loin, form the posterior muscular boundary of the abdomen.

The abdominal wall is everywhere lined by a strong fibro-cellular membrane, designated variously according to the situation it occupies. Thus we have the fascia transversalis continuous with the pelvic fascia, the iliac and inner lamella of the lumbar fascia.

THE ABDOMINAL CAVITY.

This cavity possesses several distinctive characteristics.

1st. It is the least protected by an osseous envelope.

2d. Its serous membrane is of vast dimensions.

3d. It contains important viscera outside of its serous investment.

4th. It is ever varying in capacity.

Though apparently the most exposed to violence, by a moderate inclination of the trunk on the hips and a firm contraction of its overlying muscles, force is received and diverted on other less vulnerable parts; and thus its contents may escape serious damage.

CONTENTS OF THE ABDOMINAL CAVITY.

Exclusive of the renal organs, all of the abdominal viscera are more or less completely invested by the peritoneum.

The greater part of the cavity of the peritoneum is occupied by a hollow tubular structure, the alimentary canal, the greater part of which is tethered to the spine by the mesentery. This convoluted tube is constantly distended by air and by gases, elaborated in the chemical processes of food assimilation. The gaseous distention of the intestines floats them in a serous liquid of the peritoneal sac. With the pneumatic organs above, they aid in giving buoyancy to the whole body. In the event of contusion or sudden abdominal compression, these gaseous coils, by their mobility and resistance, serve to diminish and minimize its effects.

In the normal state, all the abdominal organs are in incessant motion. This is attributable chiefly to two influences: first, to respiration; secondly, to the small intestine, from pylorus to the ileo-cæcal portal, which by a continuous vermicular motion, called peristalsis, is in ever-ceaseless action, varying according to changing physiological conditions. The circulation of the blood must constitute another factor to intra-peritoneal motion by the powerful impulse transmitted by the aortic torrent, the steady upward current through the cava, the confluent tide through the large portal tributaries, and lastly the pulsation of those large arterial trunks leading to the great centers of digestion. The coils of the jejunum and ilium lie in close contact with the anterior and lateral abdominal walls, being separated only by the omentum and probably a very thin medium of lymph. The stomach when distended with food descends down as far as the umbilicus, lying rather to the left of the median line in nearly a vertical position.

The large intestine in its ascending and descending segment lies so far back as to be well protected. The caput coli in the right iliac fossa and the sigmoid flexure in the left are more exposed. The bladder, empty, is safely sheltered by the pubes, but when distended it rises into the abdomen, its anterior surface passing against the parietal peritoneum, while its fundus is inclined toward the sacrum.

The pregnant uterus rises up into the abdominal cavity after the fourth month. It is apparent from the foregoing that the arrangement of the abdominal viscera is ever undergoing changes under various physiological conditions and various circumstances in health, and it is well to remember that all these organs, under the vitalizing influences of life, are like so many independent beings in motion, their relation then and after death bearing but little analogy. Nor should it be forgotten that assymetry of development in the organs, variability in origin and direction, with altered relations of structure, are exceedingly common in the abdomen.

The serous membrane, investing the abdominal sac and its contained organs, is variously described by different anatomists, although their descriptions are usually so complex and intricate that nobody can clearly comprehend them. To briefly and accurately describe it in a few words stripped of superfluous verbiage, it may be said that it is quite identical to the synovial membrane of an articulation; that the peritoneal cavity is simply a joint in which move and play on each other the

organs of digestion. This joint is first invested with a parietal layer, and next all the contained organs are covered more or less by the same structure; except where they are attached.

It is a lymph sac, and its fluid, secreted, serves the purpose of a lubricant. Its structural study has been vastly complicated by that apron of tissue known as the omentum, the real purpose of which is yet unknown. But in this connection, what most concerns us is an acquaintance with the functions of the peritoneum.

In the average text-book on physiology, but little information is imparted on the vital properties of the peritoneum. It is important, however, that we become acquainted with some of these before its traumatisms are considered. In examining the contents of the peritoneum, we will notice that the ganglia of the solar plexus, the center of the great sympathetic system which provides the nerve supply of all the abdominal viscera, is lodged in duplications of this serous membrane, and that it is placed behind the stomach, in front of the aorta and the crura of the diaphragm. This vast plexus we will find receives the splanchnic nerves and branches from the pneumogastric. As its filaments spread over the viscera a separate plexus in various directions is formed and designated according to locality. This system presides over vegetable life and is concerned almost exclusively in the processes of digestion and nutrition, in metabolic and regenerative changes. This we can often demonstrate in inguinal colotomy, and in other instances when on division of it with the scalpel no pain is felt. But the basement membrane of the peritoneum of fibro-cellular tissue with the advent of inflammation becomes exquisitely sensitive. The peritoneal cavity has only an imaginary existence, for all the surfaces of the viscera within it lie in close contact; contraction and relaxation of the abdominal muscles regulating the extent of intestinal distention in health and confining the viscera in close apposition. As has been stated, normally all the organs invested by the peritoneum are in constant motion, but with the advent of inflammatory changes in its textures, as this extends into the muscular and glandular coats of the intestine peristalsis diminishes or ceases, and the secretory action of the glands or follicles is for the time reduced or wholly arrested. The bladder wall, as inflammatory processes are propagated into its tunics or the overlying expulsive muscles of the abdomen, is unable to contract and expel the urine. The peritoneum possesses marvelous plastic properties, so that on the slightest irritation being applied to any part of its surface it at once becomes adherent to the nearest organ.

Another salutary property of this great lymph sac is its remarkable facility to absorb fluids.

Moderate quantities of healthy urine, bile, chyle, pancreatic, gastric or intestinal juice or blood, are promptly resorbed by it without dangerous inflammation supervening. Enormous effusions of blood into the cavity of the peritoneum are quickly disintegrated and resorbed. It is equally competent to dissipate and take up the serous elements of local inflammatory action, and my experience has convinced me that it is equally potent in walling off, reducing, destroying and resorbing small foci of suppurative formation.

The abdominal viscera being abundantly provided with a vascular supply in the event of sudden commotion, are frequently the seat of hemorrhagic effusions. This may occur into the parenchyma of a solid organ through the vessels of the mucosum of the intestine, into the lumen through the capsule of an organ, extra or intra peritoneally. The kidney, of all the organs of the abdomen, the most frequently is the source of traumatic hemorrhage.

The blood may escape through its capsule into the loose retro-peritoneal tissues within the capsule or into the hilum and escape through the ureter. In occasional instances those types of hemorrhage may coexist. They are most frequently encountered in association with spinal injuries, though they do exist independently of cord implication, as a case demonstrates now in my service (July 23, 1894).

DYNAMICS OR PHYSICS OF THE ABDOMEN.

The abdomen provides the largest cavity in the body, which may be regarded as the laboratory of digestion, the center of never-ceasing chemical and vital changes. Its contained intestinal tube bears a striking analogy to the "worm" of a still, the only essential mechanical difference being

that the concentrated nutritive elements are taken up from its walls by vascular absorbents which collect and deliver them to the general circulation. The contents of the abdomen, as we have seen, are so effectually protected from behind that damage to its contents from this direction is rarely possible, however applied. Its broad muscular apron, its antero-lateral areas, are capable of offering great resistance to force when notice of it is given.

The hollow viscera of the alimentary canal containing semi-solid fluid and gaseous elements, its anterior central surface emits a tympanitic note on percussion, and is therefore capable of considerable compression when this is applied gradually. Compressed from one side or the other, the contents of the abdomen meet with but moderate resistance against the muscular parieties. In compression applied over its dorsal wall resistance is quite absolute and complete.

Force applied directly from before encounters but a limited resistance from the recti or oblique muscles, and passes inward until it is suddenly arrested by the vertebral bodies or by the sharp edge of the promontory of the sacrum. The summit of the abdominal cavity, that part immediately under the diaphragm, is most effectually sheltered by two pneumatic buffers, which so protect the organs in the epigastrium that their osseous braces, as a rule, fracture, and the lung with its serous investment suffers, while the abdominal viscera generally escape.

[TO BE CONTINUED.]

THE GENERAL PRACTITIONER'S KNOWLEDGE AND RESPONSIBILITY IN GYNECOLOGICAL TROUBLES.

JOSEPH PRICE, A.M., M.D., PHILADELPHIA.

The gynecological specialist is the wonder of the medical nineteenth century. He is a thing apart, often made to order, and needs alcohol and glass to preserve him from the attacks of those who refuse to acknowledge him as the grand receptacle of all truths relative to women and their diseases. Where does he come from; what does he do; how does he do it and, most important of all, does he know how to do it?

The refined specialist comes from the ranks of the profession. It is not given any man to leap, ready-armed to combat any special disease, out of the arms of his collegiate alma mater medicinæ. Medical colleges give us the generalities of the science, not the specialties. True enough, we are now given a glimpse into the promised land of this or that branch of surgery or therapeutics from the standpoint of specialties, but it is as Moses gazed into that wished for country, and not as its possessor, that such knowledge is doled out. The general practitioner is a most maligned, long-suffering delver in the dross of disease, receiving little credit for his work, attainments and experience from most of those who ride above him on the fiery clouds of their own imagination. This is especially true of the made-to-order specialist, who, having no general knowledge or experience, does not see the need of it and therefore is not able to appreciate the man who has it. Many men can see no further than their own attainments nor reach into the field of others. This is especially true in the lines of many so-called specialists. What connection, they will ask, is there between this or that disease and the specialty in which I am engaged?

The whole truth is that there is just as much connection between a well-balanced knowledge of all disease and any specialty as there is a general relationship of all diseases of the economy, knowledge of which renders a man a fit practitioner of medicine. What would we say of a medical school whose professor of the practice of medicine lectured upon all diseases save that of the liver, because in his experience he had found hepatic troubles rare, or omitted brain diseases on account of the scarcity of the article, and so on through the category? In medicine and surgery we must put it down as in the exact sciences that no

knowledge comes amiss, that every fact and scientific observation is a clew or a key or a step toward some other fact, developed or latent, and that hence a general knowledge, or set, or series of facts are levers furnishing a fulcrum, or power, or place to stand upon for the digging out of new facts and making progress. Remembering all this, it is not easy to endure the opprobrium heaped upon the general practitioner, as a "hayseed," a "back number," a "mossback," a "far-away Moses" and the like. His experience is the foundation that all specialties are built upon; his knowledge is the basis of all refinement in the line of special work; his observations were the only foundations of the first specialists.

Who were the first specialists, I beg to inquire? Go over them on your fingers and see from whence their knowledge and skill of sterling rarity. How many of us to-day are on a par with them? Which of us can equal in a general diagnosis our Agnew or McGuire or Gross? And so on through the list. By whom were the early records of gynecology made? Who knows the plodding of McDowell, of the country practitioner Baynham? Who will say these men did not think and look and learn from their general work to reach out and successfully lay the foundations for all that is now received as the refined work of the best specialists? These men were types of all the pioneers in the line of accepted special work. Their knowledge was wide and varied. They were thinking men, taking nothing for granted because there was nothing to accept; thinking out their rules, testing them by reason and general experience and bringing them down to a special application.

How different all this is in the ready-made specialists. This one comes out an oculist without having seen or treated a score of cases on his own merits. That one an obstetrician, mayhap a professor, with a dozen or so cases to his credit. The successful removal of corns requires greater experience than this.

The general practitioner is, perforce of his relation to the family, bound to give much of his time and attention to the diseases of women and children. It must be remembered that women and children furnish the bulk of the work of the general practitioner, and hence his knowledge of these must be more than ordinary. To obstetrics his attention is necessarily drawn and consequently to the many problems and perplexities connected with it. If he is a careful man he must be an authority on the complications and their relation to many of the after-complaints of women and to their force as a causation of real disease. Hence it is that the general practitioner is likely to be good authority on many of the diseases of women, and particularly as to the presence of pathological conditions. Not that he is necessarily able to give positive surgical assistance in cases falling under his notice, but he is able to diagnose the presence of lesions requiring such interference.

Displacements of the uterus he at once recognizes and reduces. Or, finding the latter cannot be accomplished, he knows that adhesions have probably done their work, and he appreciates the necessity of more than ordinary treatment, because his own efforts have been futile.

He knows immediately, as Dunlap once so wittily said, that something is wrong because something is present which is not found in the anatomy. Observations and investigations must go hand in hand with previous exact knowledge. In all diagnosis what is should be weighed with what ought to be and the balance struck accordingly. Facts are facts. When we know the relatively normal conditions it is more or less easy to discover the abnormal. To the careful physician of long experience much that is written and talked these days about the value of this or that proceeding, the really ultra-refinements of presumed cleanliness will appear ridiculous. It is for him to sift each and every suggestion, to weigh it in the balance of positive experience and decide accordingly. If there is an atom of value in a suggestion, to get it out, appropriate it and make it useful is the way to make the foolishness of fools the wisdom of wise men.

Much of the work of gynecology to-day would be useless, or rather not needed, if every obstetrician were as careful as he should be in the handling of women coming under his care. A woman after parturition must neither be treated into disease nor be left in a condition to produce it.

Carelessness in the handling of women after miscarriage is a serious failing of many physicians. Broadly speaking, every woman after a miscarriage should have

the same careful attention as after confinement. She should rest, if anything, longer because the processes of labor are natural, those of abortion unnatural. In labor the placenta is most apt to come away entire, while in miscarriage it is prone to cling and give trouble. Retained placenta is the fruitful source of much of the trouble necessitating after-operation upon the pelvic organs, and is a prolific cause of subsequent menstrual derangement due to subinvolution, congestions, displacements and the like.

As to curetting in these cases, the rule for each individual case cannot be absolutely laid down. Generally speaking, it is best to avoid curetting if the discharges are not offensive, if the bleeding is only moderate and does not come on in gushes, and if there are no other indications, such as continued crampy pains after miscarriage. I do not often find it necessary to curette a uterus, but when I do I never make internal applications of carbolic acid or any other of the so-called stand-bys. I have come to consider all this as meddlesome surgery and do not sanction it. This position, bear in mind, is not a dogmatic assertion drawn from a small experience in such cases, nor is it due to a lack of observation of cases other than my own treated by escharotics, caustics and disinfectants. My opinion is a conclusion reached after a careful weighing of my own and others' experience.

Post-partum douches I consider as a safeguard rather than a necessity. Do not misunderstand me. In all this discussion we must reason together. Among you are men who have never seen a case of childbed fever in an experience of ten years, and whose routine treatment has been simple care and cleanliness without using a syringe. Others, no doubt, have seen an occasional case whose origin is now as much a mystery to them as is the origin of species. With such different experiences, opinions must vary as to the value of douching before and after labor. One view I have heard, and agree with in its philosophy, says: "If we are clean when we start and stay clean while we work, we will be clean when we stop." A post-partum douche is unnecessary. Unfortunately we do not all know how to be clean or to stay clean, and so ending clean may be uncertain. So to avoid risk the post-partum douche comes in as a prophylactic. The ante-partum douche is valuable to insure the cleansing of the parturient passages and saves possible infection of the eyes of the child. For this reason I advise the ante-partum douche. I know its value. The hot—moderately so—post-partum douche keeps us longer at the bedside of the mother, assists in the contraction of the uterus, and so is a safeguard against that awful complication of labor, post-partum hemorrhage, which I firmly believe should never occur. The douches should be mild and given carefully.

We naturally come to the consideration of the injuries to the mother, to wit, uterine and perineal tears. Injuries to the bladder are no longer frequent, thanks to the more general understanding of the forces of labor and the use of the axis-traction principle in the manipulation of the forceps. The old see-saw method of delivering women with the forceps, with a pull and a tug, with no other idea than to tear something away from her pelvis, is happily going out of fashion; not altogether gone, but going. Let me urge upon you the value of the axis-traction forceps, and at the same time I advise you to study carefully the advantages it gives us in the delivery of a woman, both for her own safety and that of the child. The subject cannot be here entered upon in detail, but I shall be happy to discuss it with you and to answer all queries on the subject.

Perineal tears are the commonest injuries met with, and are most likely to give both the doctor and his patient a deal of after-trouble. If not repaired, the woman is for a long time uncomfortable, and oftentimes her discomfort goes on to positive harm and renders her useless as an active member of the household. If the tear is through the sphincter, the filthiness of the condition is almost as bad as death itself to the cleanly woman. If the tear is but fascial, the drag and displacement of the uterus and bladder often produce most serious complications. A woman with her uterus sinking down between her thighs, or resting at the introitus vaginæ, is an object for the keenest commiseration. All this can be avoided by the early mending of the tears.

As a general rule cervical tears require special consideration. They should be stitched if relatively extensive, but it is to

be remembered that the simple contraction of the uterus often reduces what seems a serious laceration to one of comparatively small importance. Tears of the perineum ought to be mended as early as possible; not later than six or eight hours after the occurrence. This is true for two reasons: First, because they are more likely to heal, and, second, because a secondary or late operation taxes the patient with what seems an additional operation when the parts are more tender.

Again, if ether has been administered during the delivery, early operation makes a second administration of the anesthetic unnecessary, and this means a great deal to the patient. The suture material may be either silk or silkworm gut, preferably the latter. The ordinary short sewing-needle is all that is required, although the Emmet needle is better. The tear should be stitched up as any other wound, and should not embrace in the suture parts not injured. For this reason the old method of stitching from the outside when the tear is inside is all wrong. Tears in the vagina occur from the inside outward, and the stitching should be done in the same direction. If the tear extends into the bowel through the sphincter, it should be stitched carefully, as I shall demonstrate to you, to close the bowel. The ends of the sphincter muscle should be exposed and united, as I shall make plain. The so-called flap-splitting operations are to my mind not scientific in conception, and I believe the final verdict will be that they cannot stand the test of time. Too much care cannot be taken to not include too much tissue in any suture. When this is done strangulation necessarily takes place and of itself defeats union. By the inside vaginal sutures a deep vaginal bevel is produced and the parts are brought into their moral physiological relation, as may be seen on examination, for the anterior and posterior vaginal walls are in apposition.

The recognition of pelvic inflammatory conditions requires careful bimanual examination. The history of the case will help us out if thoroughly obtained, and the factors in all pelvic disease must constantly be held in mind. The gonorrhœal origin of much pelvic disease must not be forgotten nor underestimated. The history of difficult labors with succeeding inflammatory attacks, of miscarriages or abortions, must never be forgotten. As an inestimable factor in diagnosis, the bimanual examination must not be overlooked. It would be folly to expect to discover neoplasms, ovarian or inflammatory, if the normal relation, position and general contents of the pelvic basin are not thoroughly understood and distinguishable by examination. No careful general practitioner should lose opportunity to discover and map out all that is to be known of these. This being done, what is abnormal can generally be readily appreciated.

The history of ectopic pregnancy, its importance and frequent fatality, make it incumbent on all to study this subject carefully; especially to hold in mind the salient features of this condition. A long period of sterility, then disappearance of the menses followed by a stroke of shock and pain, with subsequent bleeding kept up for an indefinite period—these signs make the case suspicious. In every such case take every precaution to arrive at a correct conclusion.

Dermoid cysts often are at the bottom of much serious trouble in women, and are to be suspected in the presence of much and long-continued pain without other assignable cause. Suppurating dermoids are a prolific source of peritonitis and tumors; their position and size, with fluctuation and firmness combined, may lead us to suspect their existence.

Fibroid tumors and their removal is no longer a question of expediency. The operation is settled and is as safe as any other in surgery. The only question is when the tumor itself and when the ovary should be removed. In general terms the ovaries ought to be removed by election if the tumor is small and the woman is under forty years of age. After this period ovariotomy is of doubtful expediency and the tumor itself should be the operation of election.

You will see that in this paper I have tried rather to offer general advice than to go into a detailed description of any operation in particular. Special surgery requires special study, and the real specialist is the one who is ready to give the subject this time and study. But there are emergencies when every man must act by himself, and my object here is to suggest guiding points—how to proceed, where to stop. Otherwise the subject is too broad for an incidental society consideration.

COMMUNICATIONS.

THYROIDECTOMY IN THE TREATMENT OF GOITRE.

JOHN B. ROBERTS, M.D., PHILADELPHIA.

My object in bringing this topic before you is to call attention to the ease with which the enlarged thyroid gland can be enucleated and the mechanical symptoms caused by its pressure removed. After medicinal treatment has been employed sufficiently long to make it evident that no important change in size is to be expected, it seems to me that thyroidectomy need not be delayed.

Perhaps two months is as long as one need wait if during that time the approved remedies have been employed in full doses. It must be remembered that goitres not infrequently vary in bulk without relation to medicinal treatment; hence a diminution is not necessarily the result of the local or internal medication. If dyspnœa due to pressure on the trachea is marked, or if hoarseness from compression of the recurrent laryngeal nerves is present, one month's unsuccessful treatment by medicines would probably induce me to operate.

Parenchymatous injections of alcohol, tincture of iodine, or other irritants do not seem sufficiently successful or free from danger to be adopted as a routine, though cases may still come under my care in which I shall be willing to try them. Tapping or incision and packing of cystic goitre are available; but after the former the cyst is liable to refill, and the latter operation makes almost as much scar as, and is not much less serious than, thyroidectomy. Electrolysis does not seem to have given sufficiently certain results to make it attractive. Tracheotomy may be demanded when tracheal compression is marked, though in some cases subcutaneous or open division of the deep cervical fascia to allow the bronchocele to bulge forward will avert the threatened suffocation.

Division of the thyroid isthmus to lessen pressure, or ligation of the thyroid arteries to cause atrophy or prevent increased growth, are operations almost, if not quite, as serious as removal of a portion of the diseased gland.

I now speak only of thyroidectomy, or removal of a portion of the thyroid gland. Total extirpation is unwarranted, because the occurrence of myxœdema as a result of the entire loss of the thyroid gland is pretty well established, experimentally and clinically. The most disfiguring and most compressing part of the goitre may be removed, and a portion of one lobe left to carry on the function of the gland. I would do this even if the part left was apparently not healthy to the naked eye. It seems pretty well established that a small portion of the gland, or a small accessory gland, if such be present, is sufficient to avert the occurrence of myxœdema in patients subjected to removal of goitrous masses.

Thyroid feeding, the administration of thyroid extract, or the implantation of the thyroid gland of one of the lower animals, in the connective tissue or the peritoneal cavity of patients previously subjected to extirpation of the gland, may overcome the tendency to myxœdema; but until this is really proved the surgeon should do only a thyroidectomy, and leave a portion of the gland in position.

I shall not go over the steps of the operation in detail, as they are sufficiently clear to any operator who is prepared to deal with sharp hemorrhage and who is careful enough to avoid injuring the recurrent laryngeal nerves. A vertical incision is made in the median line of the neck or above the most prominent part of the tumor, and the necessary portion of the fibroid, cystic or hypertrophic gland enucleated. Perfect asepsis or antisepsis is essential.

The enlarged thyroid in exophthalmic goitre has been subjected to operation, but the general character of this affection would deter me from operating upon the bronchocele, which is only one symptom of the disease; unless further statistics show its value in an unmistakable manner.

I add the reports of two cases to illustrate the subject. Neither goitre was of great size, but both were annoying to the

patients. They were radically cured by operation. The enormous fibroid goitres seen especially in Europe would, of course, be more difficult to deal with, especially in regard to the control of bleeding.

CASE I.—Single woman, aged twenty-one, with a family history of phthisis; first noticed enlargement of the thyroid gland when she began to menstruate, at the age of thirteen. The enlargement rapidly increased for three years, when it began to press upon the trachea to such an extent that respiration was interfered with, and she was obliged to give up going to school because of the dyspnœa that occurred while walking. After the lapse of a year the bronchocele began to diminish in size, but for the past three or four years had not changed much in bulk.

The patient had been under medical treatment for some time for the thyroid enlargement, without diminution in the growth; and I therefore determined, in April, 1891, to excise the most prominent portion of the gland. A four-inch incision was accordingly made in the median line of the neck over the most prominent portion of the enlargement. The middle lobe or isthmus of the gland was first enucleated, and I subsequently removed the entire right lobe. In the removal the sheath of the common carotid artery, with the descending branch of the ninth nerve upon it, was clearly exposed to view. A portion of the left lobe of the gland was then enucleated, making the size of the mass removed about that of a closed fist. The arteries requiring ligation were quite large and numerous. Sublimate gauze dressing was applied with considerable pressure in order to avoid oozing.

About half an hour after the operation the patient became so cyanotic from the pressure that the dressing, which had become saturated with blood, was removed. Her pulse became rapid and weak, but the removal of the dressing, the application of hot water, the administration of digitalis and other restoratives were followed by cessation of bleeding and quick reaction. A clean dressing was immediately applied. The next day the patient was in good condition with normal temperature. The wound healed promptly without suppuration or marked swelling. The patient was sent to the seashore about three weeks after operation with the wound healed, though her voice was quite husky. This was probably due to interference at the time of operation with the recurrent laryngeal nerve.

The woman has been seen repeatedly since operation, the last time being nearly three years from the date of the thyroidectomy. Her health has continued good; her voice has recovered its normal quality, and there is no evidence whatever of myxœdema. It was because of the fear that myxœdema might occur that I allowed a portion of the left lobe of the enlarged gland to remain. The goitre seemed to be of the ordinary hypertrophic variety, though no microscopic examination was made. The contour of the neck is now almost perfect, except for the unimportant scar; and there has been no further growth in the portion of the gland allowed to remain.

CASE II.—A young man, seventeen years of age, had noticed two years previously a small swelling in the front of his throat, about an inch and a half to the right and some distance below the Adam's apple. The tumor was not painful, but steadily increased in size until at the time he came under my observation there was some interference with respiration. He came to Philadelphia for the purpose of having the growth removed a year ago, but the surgeon who examined him advised against operative interference. When I first saw him, in November, 1892, the patient was the subject of a well-marked goitre. The girth of his neck over the most prominent part of the tumor was 15¾ inches. The enlargement involved both lobes of the thyroid gland, but the right was larger than the left. Stridulous respiration was marked, even when he was perfectly quiet and not taking any exercise. Breathing became easier as soon as the growth on the right side was pushed away from the trachea. This phenomenon I repeatedly tested, and it was very marked. Above the main mass on each side was a small nodule, somewhat separated from the rest of the tumor, but evidently being the upper portion of the lobe on the corresponding side. There was a well-marked groove between the two lobes, showing little involvement of the isthmus, and a furrow between the upper nodule and the main mass on each side. There was no exophthalmus, but there existed a doubtful systolic murmur. I treated the patient for some weeks with digitalis and quinine, with ointment of

the red iodide of mercury and lanoline externally, and subsequently with fluid extract of ergot.

After a month's treatment I determined to remove the prominent portion of the gland, which was making pressure upon the trachea. The patient took ether rather badly, as was to be expected from the interference with the respiration due to the growth. The right lobe of the tumor was exposed and was found to be cystic. The cyst was opened, and about an ounce and a half of dark-brown fluid was evacuated. The small nodule above and the right lobe containing the cyst were dissected from the underlying structures. The sheath of the carotid artery was exposed, and the lower portion of the mass extended close to the sheath of the subclavian artery.

Stridor was apparent after the operation, and some dyspnœa remained, which was, however, relieved to a considerable extent by loosening the bandage. Four days later the dressing was removed. Union by first intention seemed to have taken place. A dressing of gauze and collodion was applied, and on the sixth day after operation the patient was allowed to get up. Four days later a slight hemorrhage occurred through the gauze and collodion dressing as the result of a fit of coughing. Slight oozing took place for a couple of weeks through the opening made by the giving way of the union at this time. The blood-clot contained in the cavity left by the excision of the right lobe of the gland did not break down into pus, but gradually became organized. The patient's temperature was normal during nearly the whole of the convalescence, though at one time shortly after the operation it rose to 101°. The patient was discharged about five weeks after the operation. His breathing had become normal and the appearance of his neck was greatly improved, though there was still, of course, enlargement of the left lobe. There was no hoarseness remaining as the result of the operation, as in the former case.

A year later the patient wrote to me that he had had no trouble in breathing, that his voice was normal, and that there was no change in the appearance of his neck. The operation, therefore, was in every way satisfactory.

A REPORT OF FOUR CASES OF DIPHTHERIA TREATED BY ANTITOXINE.

GEORGE A. MUEHLECK, M.D., PHILADELPHIA.

The employment of pure cultures of pathogenic microörganisms and their toxic products for purposes of immunization, as well as for combating certain infectious diseases, is comparatively of recent date. The history of the labors of Pasteur, Koch, Kitasato, and others in this field has become common property for the entire medical world, so that a mention of them here would be superfluous; but their work has opened up new avenues of investigation and research which have already yielded practical results, as it seems, of the most far-reaching consequence, and a promise of still greater achievements in the future. I refer here especially to the work of Behring, Ehrlich, Brieger, Wernecke, Boer, Schuetz, Kitasato, Wassermann, Kossel, Aronson, and others in Germany, Roux and Yersin in France, and Tizzoni in Italy, as a result of which the doctrine of immunization against certain infectious diseases has been further elucidated and experimentally confirmed on animals at least. Behring and his colaborer were the first to show that the blood or milk of animals so immunized has the power when ejected hypodermatically, or into the peritoneal cavity, to immunize other animals or to protect them from the consequences of inoculation of virulent cultures of pathogenic microorganisms or intoxication by the products of the same species with which the first animal was made refractory. In other words, the milk and blood-serum have developed antitoxic properties which have the power to neutralize the toxic action of the virulent cultures and their products. This neutralization of the toxic by the antitoxic principle takes place even outside of the animal economy when mixed

in a test-tube in obedience to the laws of proportion (Behring, "Gesamte Abhandlungen ueber Disinfection, Immunisirung, Blutserumtherapie"). Animals which have been made ill by the injection of fatal doses of virulent cultures of their filtrates are restored to health if a sufficient quantity of antitoxic serum be injected within a stated time (Behring, "Blutserumtherapie und die Immunisirungsmethoden zum Zwecke der Gewinnung des Heilserums," 1892). Of the infectious diseases which have been the subjects of this line of investigation, and in which the results have been most encouraging, tetanus and diphtheria, and, to some extent, streptococcus infection, are preëminently to be mentioned. Of these, however, only diphtheria is relevant to this paper; but the principles involved are the same in all. Behring's method of securing antitoxic serum of diphtheria for therapeutic purposes is similar to that now generally accepted by all investigators—that is, by injecting hypodermatically into an animal gradually increased doses of attenuated dead cultures of Klebs-Loeffler in order to effect a certain degree of basal immunity. Subsequently this basal immunity is intensified by injecting increased quantities of living and virulent cultures.

This method is based upon the fact already established by the investigations of Koch and Katasato, viz., that specific toxine and antitoxine neutralize each other immediately outside of the living organism when mixed in the test-tube in obedience to the law of proportion. Formerly toxine and antitoxine were injected separately, but owing to variations for absorption exact results could not be obtained. Now they are injected together. For the practical application of the method it is best to use a test-toxine, the immunizing power of which has been tested and which is derived from more mature bouillon culture, to which has been added ½ per cent. of phenol. Of the solution used by Behring and his co-laborers as a test poison, 0.3 c.c. represents the minimal fatal dose of 1,000 gms. body-weight; 0.8 c.c. of this solution is injected into an animal weighing 200 to 300 gms., together with the substances to be tested for the antitoxic power in decreasing proportions.

For example, 0.4 c.c., 0.3 c.c., 0.2 c.c., etc. The result can be determined approximately in twenty-four hours, and with accuracy in forty-eight hours, by the presence or absence of local œdema; provided that the proportions of the material to be treated for the antitoxic power have been properly measured. The quantity necessary to neutralize 0.8 of this test-toxine will vary according to the amount of antitoxine present. These injections are made *seriatim*, and always give absolutely reliable results. As a final result of their labors these investigators have animals of whose serum 1½ mlgms., or of whose milk 0.075 mlgm., are sufficient to neutralize 0.8 c.c. of this normal toxic solution. A serum is said by Behring to represent 1 antitoxine normal if 1.0 c.c.: 100 body-weight is sufficient to neutralize 0.8 c.c. of this normal toxic solution—that is, if 0.8 c.c. of this toxic solution is injected into a medium-sized guinea-pig (about 500) it will remain well if normal antitoxic serum in the proportion of 1:100 body-weight (about 5 c.c.) had been injected one-quarter hour previously (Behring, "Gesamte Abhandlungen," etc., ii, p. 323). In this manner serum has been obtained representing sixty and more antitoxine normals (Kossel and Wassermann, *Deutsche med. Wochenschrift*, 1894, No. 16, "Ueber Gewinnung und Verwendung des Diphtheritschen Heilserums") in Koch's Institute, Berlin.

Roux, who began his experiments in 1891, uses for purposes of immunization a test poison, 0.1 c.c. of which will kill a guinea-pig of 500 gms. in twenty-four to forty-eight hours. His test poison is accentuated with a solution of iodine (liq. de gram.). He gradually increases the dose by diminishing the proportion of iodine. After several weeks it is given pure. In this way very powerful antitoxic serum, with an immunizing power of 1:50,000, is obtained—that is, a guinea-pig will resist 0.1 c.c. of recent virulent cultures if serum in proportion of 1:50,000 body-weight is injected (*Annales de l'Institut Pasteur*, No. 9, September, 1894).

Since the beginning of the year 1894 antitoxic serum has been extensively used in cases of diphtheria in the hospitals of Berlin and Paris. Henoch, Heubner, Koch, Kossel and others testify to its absolute harmlessness even in doses of 90 c.c. In no instance was any irritation of the kidneys or any unfavorable influence on the general health observed

(Behring, "Gesamte Abhandlungen Disinfection," "Disinfection, Immunisirung, Blutserumtherapie"). In six Berlin hospitals 220 cases were treated, with 76.4 per cent. of recoveries. Among these were 67 tracheotomies, with 37 recoveries —that is, 51.1 per cent. The beneficial effect of the treatment was most apparent the earlier it was begun. Of 6 treated the first day, all recovered—that is, 100 per cent.; of 66 treated the second day, 64 recovered—that is, 97 per cent.; of 29 treated the third day, 25 recovered—that is, 86 per cent.; of 39 treated on the fourth day, 30 recovered—that is, 77 per cent.; and of 23 treated on the fifth day, 13 recovered —that is, 56 per cent. (*Deutsche med. Wochenschrift*, Nos. 22, 23 and 24, 1894; *Berlin klin. Wochenschrift*, 1894, No. 29).

Roux, in Paris, reports a mortality of 24 per cent. in the Maternité, while the mortality in the hospital of Trosseau, where no serum was used, was 60 per cent. during the same epidemic. Owing to the fact that the quantity of serum available in this country has hitherto been very limited, a report of the following four cases treated by this method may be of interest.

Case I.—H. C., five years old, male, was taken ill on October 18th.

Status præsens. Mucous membrane over tonsils and posterior pharynx red and congested; small spots visible over tonsils; breathing somewhat labored; cervical glands swollen; pulse, 108—strong and regular; temperature, 100⅘°; respiration, 24.

October 19th, A.M. General condition about the same; membranes have extended; breathing more difficult; temperature, 100⅘°; pulse, 108; respiration, 24. At 8.30 P.M. injection of 1 c.c. of antitoxine —Schering—near scapula.

20th, A.M. General condition much improved; temperature, 99°; respiration, 24; breathing very much easier. P.M. Condition not so favorable; breathing very difficult; retraction of epigastrium and supra-clavicular spaces during respiration; face somewhat cyanosed; pulse, 130; respiration, 24; temperature, 100°. Intubation or tracheotomy seems indicated. At 8.30, second injection of 1 c.c. antitoxine —Schering—near scapula.

21st, A.M. Breathing much easier; temperature, 99°; pulse, 100; respiration, 20; general condition much improved. P.M. Heart weak, somewhat irregular; temperature, 99⅘°; pulse, 100; respiration, 20.

22d, A.M. Heart somewhat stronger. Examination of urine showes traces of albumin, specific gravity 1020; no casts. Membranes present a dirty pultaceous appearance, and can be easily removed with a probe. P.M. Pulse regular, 78; temperature, 99⅘°; breathing easy.

23d, A.M. *Status idem.* P.M. Temperature, 99⅘°; respiration normal. Membranes have disappeared; urine negative. From this day on convalescence was uninterrupted. The temperature gradually fell, and was normal on the seventh day.

Case II.—M. D., six years of age, was seen by me October 3d. Extensive membrane on tonsil and soft palate. Temperature, 102°; respiration, 22; extensive tumefaction of glands; no involvement of the larynx.

October 4th. Membranes have extended over post-pharyngeal wall. Pulse, 110; temperature, 102½°; general condition depressed.

5th. *Status idem.* No antitoxine being available, the treatment followed the ordinary rules of practice.

To report this case *in extenso* would therefore be of no interest. The general condition of the patient remained bad until his death, which took place suddenly on the twelfth day of his illness. No antitoxine had been used in this case.

Case III.—Mary D., eleven months old, was taken ill on the 26th of October with diphtheria. No antitoxine available; death on the 28th.

Case IV.—John D., five years old, taken ill on October 27th. Membranes begin to form over tonsil and soft palate; pulse, 108; respiration normal; no involvement of the larynx.

October 28th, A.M. Injection of 1½ c.c. of antitoxine (Schering) near scapula; pulse, 108, regular; temperature, 102°; respiration normal. Extensive membranes over tonsils and soft palate; general condition depressed; urine negative. P.M. Temperature, 99⅘°; pulse, 108; membranes have not extended; general condition better.

29th, A.M. Temperature, 99⅘°; pulse, 108; membranes have a pultaceous fatty appearance and can be partly removed with probe; general condition good. Inoculated culture-tubes and sent them to

Dr. Ravenel, of the Hygienic Institute of the University of Pennsylvania, for examination. P.M. Temperature, 101°; pulse, 150; general condition less favorable; membranes presented a dirty yellow appearance.

30th, A.M. Pulse, 102; heart weak; temperature, 100⅘°; general condition fair. Dr. Ravenel reports vigorous growth of Klebs-Loeffler bacilli. P.M. Temperature, 99⅘°; pulse, 106, irregular; membranes coming away; general condition good.

31st, A.M. Temperature, 99°; pulse, 102, regular; throat almost clean, with exception of patch over right tonsils. P.M. Temperature, 99⅘°; pulse, 98, stronger.

November 1st, A.M. Temperature, 99⅘°; pulse, 98, normal. Urine negative. P.M. Temperature, normal; pulse, 96, strong; throat clean, with the exception of a small spot on right tonsil.

From this day on convalescence was interrupted only by a slight rise of temperature on the evenings of November 2d and 3d. Culture-tubes inoculated on November 6th and submitted to Dr. Ravenel for examination still show growths of Klebs-Loeffler bacilli.

CASE V.—Willie D., aged four years, was taken ill on the morning of October 28th; temperature, 101⅘°; pulse, 106; pultaceous spots on tonsils; cervical glands enlarged. Injection of 1 c.c. of antitoxine (Schering) near scapula. P.M. Pulse, 110; temperature, 101°. Pseudo-membrane has extended somewhat; larynx not involved; general condition fair.

October 29th. Temperature has fallen to 99°; pulse, 108; no extension of exudation in throat; general condition good; culture-tubes inoculated and submitted to Dr. Ravenel for examination. P.M. Temperature, normal; pulse, 146; heart weak; general condition not so good; no extension of membranes; urine contains traces of albumin and excessive phosphates.

30th, A.M. Temperature, 101⅘°; pulse, 116; heart weak and irregular; membranes have not extended, of a dirty-yellow appearance, can be removed with probe. Dr. Ravenel reports vigorous growth of Klebs-Loeffler bacilli. P.M. Temperature, 100°; pulse, 116, weak; general condition fair.

31st, A.M. Temperature, 99⅘°; pulse, 120, irregular; heart weak; membranes disappearing; urine contains traces of albumin. P.M. Temperature, normal; pulse, 102; heart still weak.

November 1st, A.M. Temperature, normal; heart weak; general condition fair. P.M. Temperature, normal; pulse, 117; heart weak.

2d, A.M. Temperature, 99°; pulse, 102; heart stronger; general condition good; throat clean; urine negative.

From this day on convalescence was interrupted by a slight rise of temperature, reaching 99°. Culture-tubes inoculated from throat on November 5th and examined by Dr. Ravenel were negative.

CASE VI.—The fifth child of this family, a little girl two years of age, remained apparently well. Her throat, however, showed a slight diffused redness. In this family of five children, who had freely commingled with each other even after the appearance of symptoms in the others, the probability amounted to almost a certainty that this little girl would not escape infection. The following effort at immunization was therefore made: ½ c.c. of Schering's antitoxine was injected on October 28th, her temperature at that time being 99°. On October 30th a second injection of 0.8 c.c. of Behring's antitoxine was made. Subsequently the congestion in the throat cleared up and the child remained well. Dr. Ravenel examined a culture from her throat on November 6th and found Klebs-Loeffler bacilli. It is important to add that the mother of these children, who has constantly been in attendance upon them, is at present writing suffering from the same disease.

I have ventured to report these few cases for the consideration of my colleagues, being well aware that their number is too small to permit of any definite conclusion as to the value of serum-therapy of diphtheria, all the cases, moreover, having been treated, in addition to the serum-therapy, according to the generally accepted rules of practice. Nevertheless, the cases here presented showed some features so striking that they appeared to be of interest. After each injection a rapid fall of temperature was noted, as you will see by the charts. This reduction, however, only lasted twenty-four hours, but when it would rise again, it was never to its original degree. In Case I, where two injections were made, the same phenomena were observed after each.

At the same time a marked amelioration in the difficulty of breathing was noted. The heart was much less favorably influenced, being often irregular and weak. Nevertheless, I feel that if a sufficient quantity of serum had been at my disposal, and repeated injections could have been made, the toxine still remaining in the circulation might have been more effectually neutralized and its depressing effects on the heart avoided. The behavior of the membranes was peculiar, inasmuch as they did not seem to thrive; they failed to spread, and in from twenty-four to forty-eight hours after the injection they assumed a fatty pultaceous appearance, and in each instance disappeared within a week. The cases as a whole ran a milder course. I do not think that the cases could be called mild ones, since the two children who had not been treated by antitoxine serum died. The continued presence of probably virulent Klebs-Loeffler bacilli in the throats of two of the other children would, I think, indicate that antitoxine serum does not kill the microorganisms themselves, but merely neutralizes their poisonous products, and that consequently isolation and poper disinfection of the throat is indicated as heretofore.

In conclusion, I desire to say that I feel very much indebted to Dr. Ravenel for his painstaking bacteriological examinations of my cases. I also desire to thank my friends, Drs. A. Klein and P. A. Trau, for their kind assistance in watching and keeping records of the cases.

My thanks are also due to Messrs. T. C. Laubach and L. B. Phillips, druggists of this city, who procured the serum for me, the latter gentleman being the first, I believe, who secured Behring's antitoxine in this city.

A GERMAN VIEW OF "AMERICANISM" IN MODERN MEDICINE.

A remarkable article has recently appeared in the *Deutsche Medicinische Zeitung*. The author's personality is modestly concealed under the pseudonym "B. L. in W." His doleful lucubrations have been widely copied by the medical press of the fatherland. The gist of B. L.'s terrible arraignment of modern medicine is that European, even including German, therapy is becoming rapdily "Americanized." How best to meet this depraved tendency in a downward direction is made the subject of his anxious inquiries.

The Teuton naturally stands aghast at the dismal vista opening before his dreamy eyes by the rapid strides of German medicine away from time-honored theorizing and scientific hair-splitting into the broad domain of common sense and the practical. That is what it means for German medicine to become Americanized.

If B. L.'s representations can be relied upon, there must be great alarm in the inner circles of German medical autocracy, where abstract science is still supposed to reign supreme, while German death-rates go on healthfully increasing.

We are told that "the American healing art has, without doubt, made extraordinary advances in the past few decades." It is indeed nothing short of disgraceful that the German public is beginning to ask the German doctors to cure German ailments on the American plan.

The involuntary confessions of B. L. disclose a peculiar state of affairs. For while America still sends its annual quota of callow youths to the empire of William II in quest of "higher medical education," the subjects of his majesty are clamoring for transatlantic notions in the conduct of medical practice. Now the *Record* has always believed in reciprocity. For this reason we will welcome to our shores all those German graduates who, after having been drilled in approved Teutonic methods of pure science, find themselves a trifle deficient in those minor qualifications of professional power which help to cure the patient. At the same time we are willing to send some of our own medical citizens across the water, in order to find out the best-sounding Greek names for diseases which they have long known how to handle, though not, perhaps, to euphoniously designate. A fair exchange on such lines ought to be helpful all around.—*N. Y. Med. Rec.*

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SATURDAY, DECEMBER 1, 1894.

EDITORIAL.

THE PARASITES OF VARIOLA AND VACCINIA.

At the Eleventh International Medical Congress there was an interesting discussion on the etiology of variola.

Guarnieri gave the results of his investigations of the forming pustules in variola, in which he found a microörganism to which he gave the name *Cytoryctes vaccinia*, and he devoted his paper largely to the morphology of the organism which he believes to be the cause of variola. This organism was observed in a hanging-drop preparation to have amœboid movement. It was observed to move in a fresh preparation from the contents of a beginning pustule when examined on a warm stage. It was also observed to divide. When properly stained with methyline blue mixed with blood-serum the *cytoryctes* show a rounded mass or body within the organism which stains very slightly, surrounded by a clear space.

At the same meeting Monti gave the results of his investigations into the etiology of variola. He has studied bacteriologically the contents of a large number of vesicles and pustules from about ten cases of small-pox, and with great constancy found in the pus *Staphylococcus pyogenes aureus* and a microphyte of the normal epithelium. He also examined in a similar manner cases of *purpura variola* where the patients died in the early stages of the disease. In these cases the cultures remained clear or developed very few colonies of known epidermal bacteria. Anaërobic cultures gave negative results.

A microscopical examination, however, of the hemorrhagic cases discovered in the epithelial cells of the Malpighian layer nests of hemorrhagic points containing characteristic bodies which stained readily, after the method of Biondi, with hæmatoxylin and with a special mixture of hæmatoxylin and safranin. These bodies were sometimes very small; sometimes from two to three micromillimeters in diameter. They varied somewhat in form, occasionally resembling the figure 8. Ordinarily each epithelial cell contains a single organism in a mass of protoplasm. The nuclei of the epithelial cells were more or less obscured by the organisms. Control examinations of other diseases gave negative results.

The constancy with which Monti found these bodies in five cases of hemorrhagic vesicles and in the prepustular stage, led to certain investigations with this substance on the cornea of rabbits. He noted that after inoculating the eye with the infected substance he found the same bodies in the surrounding cells, but with similar inoculations with other substances the wound healed perfectly in a few days.

These results led him to the conclusion that the organism described was the cause of variola or small-pox. Monti did not think that these organisms belonged to the same class of protozoa entertained by Guarnieri, but to a much simpler class of organisms, the *Lobosi*.

Since the introduction of bacteriological methods a host of observations and experiments have been made to determine the etiology of vaccinia. A few more recent observations are of interest, yet the results are still quite contradictory.

Klein (Supplement to the Local Government Report containing the report of the Medical Officer for 1892–93, London, 1894) gives the results of several investigations of calf lymph. The results are similar to many other bacteriological investigations, inasmuch as a great variety of bacilli, *streptococci*, *staphylococci*, etc., were found.

He differs, however, in finding a bacillus which appears to be characteristic of the lymph. So numerous were these bacilli that in cover-glass preparations made from the lymph they would easily be mistaken for preparations of pure cultures. They are frequently (always in seventy-two-hour lymph) in clumps. The majority of the groups included from three to eight bacilli. They contain globules which Klein believes to correspond to spores.

He was, however, unable to cultivate this bacillus on artificial media or in the subcutaneous tissue of a calf.

ABSTRACTS.

MINISTERIAL INDORSEMENTS OF HUMBUGS.

We are sorry to see the names of Christian ministers and persons occupying important positions in the Church circulating through the country indorsing barefaced frauds which are poorly executed, and no better than Indian charms. Whenever a minister of the Gospel allows his name to be attached to anything whose advertisements make statements impossible of fulfillment, or contrary to established principles of science, and especially to be mixed up with all sorts of testimonials written obviously by the most ignorant and uncultivated persons, he loses the respect, and justly, of that class of the community which in the long run fixes the estimate in which he is held.

This, together with similar exhibitions of weakness, often accounts for the failure of young men who otherwise give bright promise of success, and the early retirement of those who in spite of them had attained a good standing.

In the interest solely of our readers we advise them to pay no attention to a ministerial testimonial to remedies whose composition is a secret, or which promise positively to cure otherwise incurable or generally fatal diseases. And all the more so if the testimonial contains references to the Almighty and providential direction to buy the medicine. You may be sure then that whatever other effect the remedy has had, it has either weakened or has not improved the condition of the nerve cells upon which sound judgment depends.

When ministers go further and surrender their photographs to patent medicine venders to be used in advertisements and on bottles, they render themselves liable to one of two suspicions: Either that they have an inordinate desire to appear before the public, in which case such extravagant vanity must weaken their influence; or that they have received

a compensation for the privilege. For, that quacks of all sorts are ready to pay largely for certificates from physicians, for editorial notices, and for the privilege of publishing letters from and photographs of clergymen, cannot be doubted.

Not only do they thus render themselves liable to suspicion, but they grieve every truly refined member of their congregations, and every member, in fact, of their denomination who sees their pictures and letters displayed for such purposes. Could many of the ministers know what is said of them, self-interest would lead them to refuse in every case. It should be taken as an insult by every minister of the Gospel of Christ to be asked to furnish his photograph, or to consent to its use, as a part of a patent medicine or any other advertisement.

In one instance the name of such a person was proposed for the pastor of one of the best churches in Methodism. A brother of high character and respectability, noted for his kindness when speaking of ministers, rose and said: "I hope that this brother will not become our pastor." "Why?" said half a dozen voices. He did not reply, but spread before them a newspaper containing the photograph of the minister, in connection with three or four letters, one from himself interlarded with ascriptions of praise to the Deity for having led him to buy the —— pills. His name was not mentioned again.—*Christian Advocate.*

THE DIAGNOSIS OF TUBERCULAR JOINT DISEASE.

A. G. Miller, F.R.C.S.E., Surgeon to the Edinburgh Royal Infirmary, writes (*Edinburgh Med. Jour.*, November, 1894): In my experience as a hospital surgeon I have not infrequently seen mistakes made in the diagnosis of tubercular joint disease. From the statistics of the hospital reports, I gather that the proportion of tubercular to all other joint affections is from three-fourths to four-fifths. In this calculation I no not include spinal or sacro-iliac cases —only the joints of the extremities.

I have drawn almost entirely from my own experience. Consequently my views may not coincide with those of other surgeons. I give them, however, to the profession for what they are worth, hoping that they may be of use to some.

The affections that in my experience are liable to be confounded with chronic tubercular joint disease are the hæmophilic joint; the hysterical joint; sarcoma; chronic traumatic synovitis; syphilitic synovitis; chronic rheumatoid arthritis; tubercular epiphysitis; tubercular bursitis; and tubercular teno synovitis. Before dealing with the differential diagnosis of chronic joint tuberculosis from these various affections, I would first point out what I believe to be the leading and most reliable characteristics of chronic tuberculosis of the joints of the extremities. These are mainly six:

1. Mode of onset—history of slight injury or none.
2. Appearance of joint—pale, ovoid, smooth, etc.
3. Temperature of joint slightly raised.
4. Absence of pain, except on movement.
5. Limitation of movement by muscular spasm.
6. Atrophy of muscles, especially of the extensors.

1. The mode of onset. The patients who mostly come to us with tubercular joints (children and adolescents) are very liable to have injuries, and they are so accustomed to these that they think nothing of them, but immediately forget them. Older patients are very apt to remember, or at any rate to classify, their diseases by the treatment to which they have been subjected on their account. An injury, consequently, that has received no treatment is generally forgotten. There may be no history, therefore, of an injury, and the onset is said to have been insidious.

On the other hand, we often get a history of a slight injury which caused a slight amount of swelling, hardly sufficient to oblige the patient to remain in bed—or perhaps only for a short time. The patient goes about, limps a little, or is stiff and constrained in some movements (if the upper extremity is affected), and perhaps cries if roughly handled. The joint never gets well. The swelling comes and goes, but never quite disappears. Movement becomes more restricted and painful.

Up to this point inflammation is not feared by the parents, because the joint is not apparently inflamed. Sometimes, however, a bonesetter is consulted, on the supposition that the "joint is out." He wrenches the limb and makes things much worse, and then orthodox advice is sought. Every hospital surgeon knows that this is a very common history which I have been trying to sketch.

I believe, therefore, that all these cases originate in a slight injury (I never saw one which originated in a severe one), which is not treated and forgotten, or is treated in such a way as not to bring about a perfect recovery; that is to say, the joint is never properly rested.

2. Appearance of joint. The pale and rounded or ovoid appearance of the joint is, of course, well known, having originated the ancient title of "tumor albus." The skin looks wonderfully natural. There is, however, a smoothness, due to the obliteration of the normal folds and furrows, which is peculiar. There may be some unusually distinct superficial veins and a number of long silky hairs—if the patient be old enough.

The normal prominences of bone, which give the distinctive external features to each joint, are smoothed down or obliterated by the swelling which gives the characteristic rounded or ovoid appearance to the tubercular joint. This condition is sometimes made out properly only on careful comparison of the affected joint with the normal one. The smooth rounded appearance is explained by the slow increase and œdematous character of the swelling. That is to say, the swelling is an œdema, and as it occurs very slowly, it has time to find accommodation in the hollows and convenient slack places in and around the joint, where there are no restraining attachments of ligaments and tendons.

3. Temperature of joint. This is usually slightly, but distinctly, raised as compared with the corresponding healthy joint. This rise of temperature is always present and denotes the existence of an inflammatory process in the joint. Now, it must be remembered that this inflammatory process is not a slight one, though external appearances and subjective symptoms may tempt us to suppose so. I have learned and I teach that the amount of disease present is always in excess of the apparent symptoms. When one cuts into a tubercular joint, one is often surprised to find the amount of disease and destruction that is revealed.

The general temperature of the patient may be raised also, but sometimes it is normal or even subnormal. If raised, it follows a somewhat irregular course, and the highest point is not registered in the evening, as in other inflammatory affections, but often in the afternoon.

4 and 5. The fourth and fifth symptoms I will take together, because they are mutually dependent and explanatory. These two conditions are absence of pain except on movement, and limitation of movement. I might perhaps divide this very characteristic condition of strumous joints into three: 1, apparent absence of pain; 2, pain on attempts at passive movement; and 3, limitation of movement on the part of the patient. This double or triple (as you take it) condition of a joint I consider very characteristic of strumous disease.

We all know how patients can walk into hospital (limping perhaps more or less) with a hip, or knee, or ankle joint which is distinctly diseased, and perhaps has been so for some months. Again, a child may come to us who holds an arm in a rigid manner, who nurses it carefully, and who is very suspicious of its being handled; and yet the parents will say that it does not complain of it except when it is touched.

We know how surprised students often are when they are told that such joints are tubercular and require to be excised; and how still more surprised and terrified the parents are when told that an operation is necessary.

The absence of pain is what deceives. And it is ignorance that a joint may be far gone with strumous disease and yet apparently painless (except on movement) that leads to the destruction of so many joints; for the early stage of the disease is overlooked or not diagnosed, and the only period during which perfect recovery can be obtained, by proper treatment, is lost. Pain on movement is not a symptom peculiar to strumous joints, but absence of pain except on movement, associated with more or less fixation of the joint, is, I think, peculiarly characteristic of tubercular disease.

The absence of pain is due to fixation of the joint and to the slight degree of in-

flammation present. The latter is subacute and chronic. At the same time, though slight in degree it is extensive, as I have already said, because it usually involves, sooner or later, all the tissues constituting the joint—bone, cartilage, periosteum, synovial membrane, ligaments. The condition is arthritis—that is to say, an affection of the joint as a whole, and not a synovitis merely, as it is sometimes designated. This latter peculiarity of strumous disease explains the characteristic pain on movement, for with movement one (or more) of these structures is hurt and pain results. They cannot all escape. Indeed, they are all more or less hurt by movement. The absence of pain, therefore, is only apparent, being due to the involuntary fixation of the joint by the patient, to prevent the pain that would be caused by movement. The apparent absence of pain and the fixation of the joint have the same explanation, and that is why I have bracketed them together.

That the rigidity of the joint is due to muscular spasm is easily demonstrated in the early stages of the disease (before destruction of tissue and adhesions have taken place) by placing the patient under chloroform, when free movement of the joint is at once obtained.

The explanation of this muscular contraction or spasm is well known—it is reflex. By an impulse sent from the diseased joint to the spinal cord, and a reflected impulse sent to the muscles acting on the affected joint, the latter is fixed or splinted and painful motion prevented. In this way nature tries to bring about recovery, and has suggested to surgeons the method of treatment that has hitherto been most successful, viz., immobilization.

The affected joints (hip, knee, elbow) are generally not only fixed, but bent. This is explained by the well-known fact that the flexors are more powerful than the extensors; and the joint is usually more comfortable when bent than when straight, probably from the same cause. This rigidity or fixation is not confined to tubercular joints. We see an example of it in hallux rigidus. There the great toe is splinted on account of the existence of an arthritis. We see the same rigidity in the spine in early caries.

6. The last symptom which I would refer to as specially characteristic of tubercular joint disease is atrophy. This atrophy has many points worthy of consideration:

1. It affects the whole limb more or less.

2. It is greater and more rapid than can be explained by mere want of use.

3. It is more marked than in any other joint affection.

4. It specially affects certain muscles and groups of muscles; each joint having its peculiarities, which are very constant.

1. In strumous joint disease the whole limb atrophies. This is well known and I need not dwell on it. Witness the shrunken and wasted limbs in hip, knee, shoulder or elbow disease. There are two points, however, to which I would like to draw attention. The atrophy is not limited to the muscles, but affects the limb as a whole, and in the second place, this atrophy of the limb is apt to persist even after recovery of the diseased joint. Of this there are many examples, which must readily occur to the minds of all surgeons. I repeat, the atrophy is of the limb as a whole, muscle and bone alike, and it tends to persist. What is the explanation? I believe that the cause is a reflex contraction of the arteries of the limb which interferes with nutrition. I have been led to that opinion by observing, when I have had occasion to amputate for tubercular joint disease, that though there may be many active vessels in the neighborhood of the disease, the main arteries are always very small. I have often observed the latter about half the size one would expect them to be under ordinary circumstances —in a primary amputation, for instance.

2. The atrophy is greater and more rapid than would be caused by mere want of use. This, I think, is now generally admitted and recognized. There are several facts which go to prove this. We have seen, for instance, that when cases present themselves for treatment the limb is still being used to a certain extent; yet there is in such cases always well-marked atrophy.

3. The atrophy in strumous disease is more marked and rapid than in any other joint affections. This statement I cannot prove by statistics; I speak merely from experience. I thoroughly believe this, and more than once a rapid and extreme atrophy has made me suspect tubercle, the diagnosis being subsequently confirmed.

Muscular and general atrophy is usual in joint affections; but, I repeat, it is most marked in strumous disease.

4. The atrophy specially affects certain muscles and groups of muscles. These are, stated generally, as follows: Hip, glutei; knee, quadriceps extensor; ankle, extensors; shoulder, scapular muscles; elbow, triceps and biceps; wrist, muscles arising from internal condyle of humerus.

I take these merely as examples. The flattening of the hip and loss of the natal fold on the thigh are well-known signs of hip disease. The wasting of the quadriceps extensor in disease of the knee joint is also familiar. When one examines the thigh in such a case, it is wonderful how little seems to lie between the skin and the femur on the front of the thigh. Then in disease of the shoulder the prominence of the spine of the scapula from the wasting of the supra and infra spinati muscles is very evident, as also the prominence of the acromion from wasting of the deltoid.

Pathological Note. — The usually accepted explanation of atrophy is that it is due to a reflex action through the trophic centers in the anterior horns of the spinal cord. But why does the atrophy affect certain muscles earlier and more than others? Hilton* has pointed out that the same nerves which supply any joint supply also the muscles acting on that joint. In this way he explains the unconscious fixation of a diseased joint which always occurs and to which I have already referred. In the same manner he explains the flexion that usually takes place (knee and elbow) by the greater power of the flexors over the extensors. But he does not explain the atrophy. Ferrier† does this by telling us that extensor muscles are always earlier and more quickly atrophied than the flexors, because they are the weaker. "The vitality of the extensor centers and nerves is the first to become exhausted by any condition tending to lower the vitality of the nerve centers and nerves in general."

Charcot‡ has shown that muscular atrophy from disease of a joint is not the same as that from want of use—the latter being a fatty degeneration, which the former is not. He was of opinion that nerve irritation alone is capable of determining rapid and early atrophy of muscles, and that the diseased-joint irritation does so markedly, because its irritation is continuous. He points out also that atrophy started by joint disease is apt to persist and to cause general atrophy of the limb (to which I have already referred). In the *British Medical Journal** there are references to investigations made by German and French observers, who found a simple degeneration in the atrophied muscles connected with joint disease. The muscles "were obviously atrophied and of a paler color than those on the other side, and they had lost their firmness and elasticity." The microscope showed "no trace of degeneration," but the "fibers were considerably smaller than they should be." This, it appears to me, points to what I have already suggested in my paper on Bier's method of treating tubercular joints by congestion, viz., that the reflex action, acting through the trophic centers in the anterior horns of the cord, causes a contraction of the arteries. It seems natural to suppose that diminution in the size and power of a muscle should be due to a diminished blood supply; and if the object, so to speak, of a reflex action is to cause atrophy of a muscle, surely the quickest and surest way would be to shut off the blood supply. Then one must remember that though the atrophy begins in certain muscles, it ultimately extends to the whole limb and tends to persist.†

Muscular atrophy cannot be due to muscular spasm in the cases we are considering, because the muscles affected with spasm are not those most atrophied—*e.g.*, in the case of the knee the hamstrings are most contracted and the quadriceps is most atrophied. Again, this theory will not explain the atrophy of a whole limb—muscles, bone and all.

Another explanation has been offered of the muscular atrophy in tubercular joint disease: for instance, of the deltoid in shoulder and the quadriceps extensor in knee affections, viz., that the tubercle bacilli enter the muscular substance from the subjacent joint and cause a low form of inflammatory process which produces

*"Rest and Pain," second edition, p. 150

†*Lancet*, August 12, 1893, p. 386.

‡"Diseases of Nervous System."

*Epitome, January 24 and July 11, 1891.

†In Holmes' "System of Surgery," vol. ii, p. 209, several instances are given of muscular atrophy resulting from contraction of blood-vessels from reflex causes and neuralgia; and an instance is given of atrophy of the muscles of the thumb and hand due to an injury to the ulnar artery.

the atrophy. No proof of this has, however, been adduced; indeed, as we have already seen, the atrophy has been proved to be a simple one, unconnected with any degenerative or other change in the substance of the muscles themselves.

At the same time, one must admit that it is very likely that the muscular substance is tubercular in some way, for it has been demonstrated that muscle from tubercular animals, although it may seem perfectly sound and good, is capable of infecting guinea-pigs with tuberculosis.

In what way is the apparently healthy muscle infective? Does it contain spores? Are bacilli derived from the blood and lymph vessels? How do the lower animals get their tuberculosis? Why has muscle tubercle not been observed in man? These are questions that suggest themselves, but cannot, of course, be discussed in this paper.

The Strumous Joint.	*The Hæmophilic Joint.*
1. Slight injury or none.	1. Injury, often slight.
2. Joint pale, ovoid, slightly warm, boggy (seldom fluctuating; patella fixed in knee case), and synovial membrane thickened (œdematous).	2. Joint pale or slightly discolored, rounded in outline (shape that of simple synovitis), warm, boggy or fluctuating (in case of knee patella, movable).
3. Limb fixed, movement painful and resisted by muscles.	3. No fixation or pain on movement if performed gently.
4. Marked muscular atrophy, especially of extensors.	4. Muscular atrophy not a sympt m.
5. Presence of tubercular affections elsewhere.	5. Marks of ecchymosis.
6. History of tubercle in family.	6. History of hæmophilia among males of family, transmitted through females. History of former bleedings from cuts; epistaxis, etc.
7. Patient delicate-looking.	7. Patient delicate-looking.
8. Rest will not bring about a cure in a week or two.	8. Rest will cure in a week or two.

I now take up the subject of differential diagnosis, and this will have been made more easy by the fullness with which I have gone into the diagnostic points of tubercular disease.

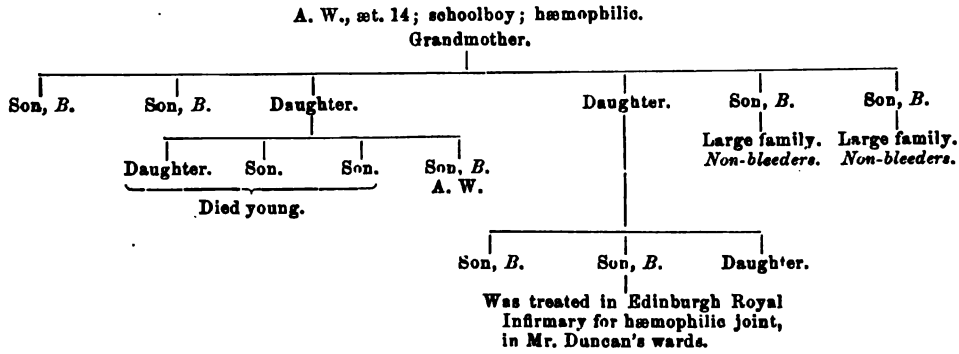
I. The first affection I take is the hæmophilic joint. The hæmophilic joint is very like the tubercular. There is usually a history of a slight injury. The joint is pale, rounded in outline and not painful. Flexion, however, may cause pain. There may be some muscular atrophy. The child is delicate-looking and may have a suspicious family history, some relatives having died of tubercular disease. The diagnostic points on which I would rely are: 1. Movement of the joint is fairly good and is not resisted by muscular reflex, because it is not painful if done gently. 2. Muscular atrophy, if present, is not marked and does not affect special muscles as in tubercle. 3. Marks of ecchymosis may be present, both recent and ancient. It is quite legitimate in a doubtful case to pinch the child and look next day for an exaggerated ecchymosis, which is sure to occur in a hæmophilic case. 4. The history of previous epistaxis, or bleeding from cuts, is a valuable help. 5. If the joint, or some other, has been affected previously, it will have recovered with perfect restoration of function—a state of matters that does not occur, in my experience, in tubercular disease. 6. Then there is the family history. Bleeders appearing among the males, but transmitted through the females of the family. 7. Lastly, time will show. In a few days there may be discoloration over the joint from the soaking through of the blood in the joint, and in a few weeks the joint will get perfectly well if it is rested. This, of course, will not occur in a tubercular joint (more the pity).

In this connection I would like to record the case of a boy who has been frequently under my care for hæmophilia.

A. W. came under my care first when about four years of age. He had an enlarged knee joint, which was diagnosed as white swelling, partly from its appearance and partly from the history of his father having died of phthisis. The joint was treated by rest and improved somewhat. As there was great restlessness on the part of the patient and some suspicion of starting of the limb, the actual cautery was applied. This at once demonstrated the true nature of the case, because when the sloughs separated bleeding commenced and nearly proved fatal. The joint recovered perfectly. Since then the boy (who is now fourteen years of age) has frequently been under my care for epistaxis, cut fingers and effusion into a knee or an elbow joint. When last seen he was perfectly well, not a trace being left

of any of his joint affections. His family chart, which is very typical, is appended.

II. The hysterical joint is sometimes very difficult to diagnose from strumous disease. I have treated several cases in which the hip and knee were affected. Two cases of hysterical hip occurred in ladies, two in boys. The two former got well under massage, counter-irritation and change of air. The two latter were cured



at once by circumcision. Two knee cases were females, one of whom has been under treatment for several years.

In regard to the question of diagnosis, the points I would depend upon are: 1. Numerous and changing painful spots. 2. Want of definiteness and accuracy in symptoms. There is a difficulty in making out what the condition really is, and there is not a true ring in the symptoms. 3. The patient has the peculiar "shifty" look of hysteria, which I cannot describe, but which is generally easily recognized once attention is directed to it. The ovaries may be tender, etc. 4. All symptoms disappear under an anesthetic and reappear on the patient recovering consciousness.

The Tubercular Joint.	*The Hysterical Joint.*
1. Joint pale, ovoid, hot, boggy; large veins, hairs, etc.	1. Joint enlarged; nothing definite to be made out.
2. Joint fixed; movement painful.	2. Joint fixed; movement resisted.
3. Pain not a special symptom.	3. Hyperæsthesia; pain at varying points.
4. Marked muscular atrophy, especially of extensors.	4. Limb may be smaller, but there will be subcutaneous fat.
5. History of tubercle, and perhaps presence of tubercle elsewhere.	5. History of nervous complaints. Evidence of hysteria; ovaries sensitive, etc.
6. Disease progressive, or else improving under treatment.	6. Disease stationary and no improvement from local remedies.
7. Under chloroform distinct evidence of disease.	7. Under chloroform all symptoms disappear.

III. Sarcoma of the lower end of the femur I have seen mistaken for tubercular knee joint, and I have seen several cases of advanced tubercular disease of the knee that resembled sarcoma in external appearance. I could imagine the same sort of thing in connection with the shoulder and other joints. The resemblance is in appearance—that is to say, it is external and superficial. Both conditions present a swelling in the neighborhood of the joint, smooth, rounded or ovoid in outline, with engorged superficial veins coursing over it; warm to the touch; soft, elastic, perhaps fluctuating; often especially soft at one point as if pointing. The patient is probably young and delicate looking, gives a history of an injury followed by a swelling, which enlarged slowly at first and then more rapidly. There is muscular atrophy of the limb. The resemblance to white swelling is considerable, but on closer investigation we find in the case of a sarcoma that the swelling began on one side (where the injury probably had been) and was small at first and localized. At this time the patient is perfectly healthy. But he begins to show evidences of delicacy and wasting after the swelling has existed for a month or so and after it has begun to grow more rapidly and to cause pain. We find also that the swelling takes only a month or two instead of several months to grow. Then on examining

the part locally we find that the joint is really not involved. Movement is possible (within certain limits) if carefully performed, there being no true splinting of the joint. The swelling is somewhat to one side, and the patella, though lifted up, is usually on one side. There may be pulsation. Atrophy, sometimes considerable, is more general than in tuberculosis.

It will be seen that I refer to advanced cases—*i.e.*, of several months' duration.

White Swelling.	*Sarcoma.*
1. History of slight injury.	1. History of injury.
2. Joint pale, ovoid, warm, boggy; enlarged veins, hairs (if suppuration, fluctuation, pointing).	2. Swelling near joint; smooth, rounded, warm, elastic, large veins; may fluctuate at parts.
3. Limb fixed; movement painful.	3. Healthy joint can be made out.
4. Marked muscular atrophy, especially of extensors.	4. Muscular atrophy general.
5. Tubercular history and tubercle elsewhere.	5. No tubercular history; patient healthy till tumor began to grow.
6. Comparatively slow growth.	6. Comparatively rapid growth.
7. Slight rise of temperature, which is irregular.	7. If rise of temperature, it is steady.
	8. Growth commences at one side; may pulsate.

It is only in such that I have seen difficulty in diagnosis. In early cases there ought to be no difficulty.

IV. Chronic traumatic synovitis may be diagnosed from white swelling by—

1. The history. Injury usually pretty severe. Sharp, acute synovitis not completely cured. Family history good.

2. Movement fairly free and not painful, unless there are adhesions.

3. If adhesions, then flexion is painful only when adhesions are put on stretch. In other words, movement is free and painless up to a certain point.

4. No marked muscular wasting. If present, is general and not special. To put the thing in a nutshell, this is a synovitis. The tubercular affection is an arthritis.

5. Swelling shape of synovial membrane, with fluctuation (floating patella in case of knee). Thickened synovial membrane may be felt at margin sometimes.

In this connection I would like to say a few words on two points: 1, adhesions; 2, thickened synovial membrane.

1. Adhesions. The diagnosis of these adhesions is usually easy, and they, if present, aid the general diagnosis very much. The diagnostic point is freedom of movement and painless movement *up to a certain point.* Then come both pain and fixation of the limb by the patient. This is seen best in the knee and is very characteristic. The knee may be used fairly well in walking, but if an attempt be made to fully flex the joint, acute pain is produced when a certain angle is reached and the patient at once resists. Sometimes the patient, anticipating the painful stage, resists the flexion before the adhesion-point is reached. This is very different, however, from the general spasm and fixation of the limb, or splinting by muscular contraction, that occurs in tubercular arthritis.

Strumous Arthritis.	*Chronic Traumatic Synovitis.*
1. Slight injury or none.	1. Pretty severe injury.
2. Joint pale, ovoid in outline, slightly warm, boggy; synovial membrane œdematous.	2. Joint pale, swelling shape of synovial membrane, fluctuation, synovial membrane thickened.
3. Limb fixed by muscular spasm.	3. Joint movable, unless adhesions, when movement arrested abruptly at certain point.
4. Marked muscular atrophy, especially of extensors.	4. Muscular atrophy slight and general, not special.
5. Tubercular history and tubercle elsewhere.	5. No tubercular history or manifestation.
6. Slight rise of temperature, of irregular type.	6. Temperature normal.

2. Thickened synovial membrane. This is most easily made out by pressing on the margin of the synovial membrane. In the knee, for instance, at the upper edge of the pouch above the patella. This thickening differs from the œdema of tubercular disease by being firmer, denser and more defined. This can be easily understood when we consider that the one is a genuine hypertrophy of the synovial membrane, the other an inflammatory œdema.

V. I shall next consider syphilitic synovitis, which I have met with almost solely in the knee joint. This should not be difficult to diagnose from tubercular disease, though it is sometimes difficult to differentiate from simple chronic synovitis and chronic rheumatoid arthritis. The main point of distinction is the history of the case. Previous history of syphilis, no

traumatism; not infrequently bilateral; not giving way to ordinary treatment, but improving under mercury locally and potassium iodide internally.

VI. Chronic rheumatoid arthritis may be mistaken for tuberculosis. I think that they are not infrequently confounded, and I have seen cases in which only animal inoculation could possibly have decided the matter. In advanced cases of both diseases you have involvement and ultimate destruction of all the tissues forming the joint. The synovial membrane is thickened, the cartilage is destroyed, the bone is inflamed, and the ligaments are softened and stretched, permitting lateral movement accompanied with grating. You may have suppuration in either case

In early cases of chronic rheumatoid arthritis I would rely for diagnosis on—(1) the condition of the bone; (2) the presence of fluid; (3) the affection of other joints; (4) condition (pain especially) affected by changes in the weather.

In advanced cases, in which somewhat acute symptoms have supervened and in which there is softening of the bones (carpus), still more if suppuration have occurred, diagnosis from tubercle is more difficult. But this is of less importance, because the treatment is the same, viz., excision of the joint or amputation. These latter cases may be, I am quite prepared to admit, genuine tuberculosis in-

Strumous Arthritis.	*Syphilitic Synovitis.*
1. Slight injury.	1. Came on slowly.
2. Joint ovoid and boggy.	2. Joint shape of synovial membrane; fluctuating.
3. Rigid and painful on movement.	3. Painless, movable, but weak.
4. Atrophy marked and special.	4. Atrophy slight and general.
5. May be multiple, but not symmetrical.	5. Sometimes symmetrical.
6. History of tubercle.	6. History of syphilis.
7. Tubercle elsewhere.	7. Traces of syphilis elsewhere.
8. Not materially benefited by mercury and K. I.	8. Benefited by mercury and K. I.
9. Increase of temperature.	9. No increase of temperature.

grafted on chronic rheumatoid arthritis; but, as I have already said, animal inoculation could best decide that.

VII. The last condition that I shall contrast with tubercular arthritis is tuberculosis occurring near but not in a joint. Under this head are tubercular epiphysitis and tubercular bursitis. The former may involve the joint early and thus become an arthritis or may give rise to an epiphyseal abscess. The diagnosis ought to be easy, and in my experience there is usually no difficulty.

The point most to be relied on is the fixed pain in the epiphysis, increased by pressure, but not by gentle movement, and generally worse at night. In short, the localizing of the disease in the epiphysis, and not in the joint, settles the diagnosis.

In regard to tubercular bursitis he diagnosis is sometimes not so easy. The

Tubercular Arthritis.	*Chronic Rheumatoid Arthritis.*
1. Patient usually young.	1. Patient usually advanced in life.
2. Tubercular history.	2. History of rheumatism or gout, or both.
3. Tubercle elsewhere.	3. Chronic rheumatoid arthritis elsewhere.
4. Joint ovoid and boggy.	4. Ends of bones enlarged; synovial membrane thickened and containing fluid.
5. Joint fixed; pain on movement.	5. Pain on movement, perhaps grating; joint not fixed.
6. Muscular atrophy, especially of extensors.	6. Muscular atrophy general.
7. Not affected by weather.	7. Affected by weather.
8. Slight rise of temperature, which is irregular.	8. No rise of temperature generally; rather subnormal.

Tubercular Arthritis.	*Chronic Tubercular Epiphysitis.*
1. Joint enlarged, ovoid, boggy, etc.	1. Joint free; swelling above or below joint.
2. Pain not a prominent symptom, only on movement.	2. Pain on pressure on epiphysis; worse at night.
3. Joint fixed, etc.	3. Joint not fixed usually.
4. Atrophy of muscles, etc.	4. Atrophy not so marked and not "special."
5. No special œdema of limb.	5. Limb œdematous below diseased part; slight collection of fluid in joint (symptomatic).
6. Slight rise of temperature, which is irregular.	6. Rise of temperature more marked.

bursæ that I have seen most affected are —(1) that over the trochanter major; (2) under the tendon of the psoas and iliacus; (3) over the patella; (4) under the ligamentum patellæ; (5) under the deltoid. The first two may be confounded with hip-joint disease. The treatment, however, is practically the same, so an error does not much matter.

I have found these bursal affections usually connected with disease of the underlying bone. Whether the disease commences in the bone or the bursa, I do not know; but I would be inclined to suspect the bone. I always treat these cases as if they were joint disease. The general diagnosis depends, as in the former instance, in localizing the disease. If the joint be healthy the disease must be elsewhere. Pain, swelling, etc., will then localize the diseased condition.

There is another affection to which I might refer here, viz., tubercular tenosynovitis; but the differential diagnosis of this from tubercular arthritis should not be difficult in any ordinary case.

In conclusion, I wish to say that I do not submit the above descriptions and remarks as exhaustive of the subject. They are intended, being the outcome of my experience as a hospital surgeon during the last twelve years, to be an aid to others who may not have had as much experience in tubercular joint disease.

SOCIETY REPORTS.

THE COLLEGE OF PHYSICIANS OF PHILADELPHIA.

Section on General Surgery.

Meeting of November 9, 1894.

William J. Taylor, M.D., presented a paper on

WOOD-PULP SPLINTS AND SPLINT MAKING MATERIAL, AS SUGGESTED BY DR. E. A. TRACY, OF BOSTON.

I have here a number of splints made from a new material, the invention of Dr. Edward A. Tracy, of Boston, and which he was kind enough to send me, along with some of the sheets of the material itself. You have probably all seen the article by Dr. Tracy in the *Medical News* of March 17, 1894, entitled "A Brief Splint-Technology for Surgeons." When I read the article I was so much impressed with the probable value of the material for splint-making that I wrote to him, and it is in answer to this letter that he sends me these samples.

All of these splints were made by him and have been in actual use at the Boston City Hospital. He writes me that "the results to be gotten will repay the trouble of acquiring the proper technique—and this trouble is but slight."

The material is best described by Dr. Tracy's article, just referred to, and of which the following is an abstract: "The basis of the material is wood-pulp, made preferably from the crushed fiber of the poplar tree, and rolled in such fashion that the broken fibers intertwine in every direction and loosely, so that an increase of plasticity is thus given the product. These sheets are further strengthened by having a fabric introduced between the layers of the pulp, or by interweaving with the short, crushed wood-fiber, a long jute or other tough fiber.

"The sheets are rolled of different thicknesses, and are numbered one, two and three, according to their thickness in millimeters.

"The chief characteristics of this material are stiffness or rigidity when dry and plasticity when moist. Its rigidity can be increased *ad libitum* by the use of a silicate solution as a moistener. Its plasticity has a limit, but this is rarely reached except when molding the material over certain complex curved surfaces. Besides the foregoing characteristics, the material possesses that desideratum of a splint material—extreme light-

ness. Its cheapness also deserves passing mention.

"Water or a stiffening solution can be used to moisten the material. If water is used the splint must be protected from the perspiration, lest it soften, by a covering of oiled silk or paper, or best by shellac. A stiffening solution with several qualities to recommend it is that of silicate of potassium; silicate of soda is almost as serviceable. Any desired degree of rigidity can be imparted to a splint by using this solution—the amount of rigidity depending upon the strength of the solution. Dextrine in the proportion of 8 ounces to the pint of water adds some tenacity besides stiffness. A splint made with its aid can be moistened with water and remolded—quite an advantage in many cases.

"In using this material the aim should be to get barely sufficient moisture to render the material semi-plastic. If more moisture is absorbed it becomes difficult to maintain the molded splint in the desired shape while drying, and it also unnecessarily lengthens the time required to dry it. The best manner of moistening the splint blank is to apply the fluid used on each side of it alternately by means of a flat paste-brush. A little practice will enable one to judge the precise amount of moistening best suited to the purpose. The time required for drying the molded splints varies from ten to forty minutes, according to the thickness of the material used; any source of heat can be employed, a kitchen fire being serviceable and nearly always at hand.

"While drying the splint after it is molded to fit the part, it is well to wind a bit of yarn or string around it to aid in retaining its shape until it is sufficiently hard to keep its form"

He then describes in detail the application of splints made from this material to different portions of the body, including the head, the trunk, and the upper and lower limbs.

As I have only just recently received the material my personal knowledge of the technique is limited, but I can readily see the ease with which the sheets can be molded to fit inequalities in the limbs. The extreme lightness of the splint will be of the greatest service in many cases, and will be much more comfortable to the patient than the heavier and more cumbersome splints in common use. Then, too, by coating the splint with a silicate solution, it becomes impervious to moisture and can be washed daily with an antiseptic solution.

Dr. J. B. Roberts read a paper on

THYROIDECTOMY IN THE TREATMENT OF GOITRE.

(See page 754.)

DISCUSSION.

DR. G. A. MUEHLECK: I have a case under observation at present with a well-marked hypertrophy goitre which I am treating after the method of Garé, which is practiced at Professor Bruns' clinic at Tübingen. It is the parenchymatous injection of iodoform in a solution of ether and olive oil, the proportions being seven grammes each of olive oil and ether and one gramme of iodoform. Under this treatment the measurements of the enlarged gland are diminishing rapidly. Garé published the clinical records of twenty-five to thirty cases in which this method was carried out with exceedingly gratifying results. I am speaking, however, only of the hypertrophic form.

DR. WM. J. TAYLOR asked if Dr. Roberts had noticed any especial respiratory difficulty or nervous shock in his operations when working near the sheath of the vessels of the neck or in deep dissection. In two cases coming under his observation which were being operated upon for goitre, everything seemed to be going on well, when suddenly during the dissection, in which there had been no hemorrhage of any account, the patient had some respiratory difficulty and rapidly sank, dying in a few hours without any obvious reason.

DR. G. G. DAVIS: There are cases of goitre in which the tumor is not very deeply seated and does not go below the sternum and great vessels, so that it can be easily shelled out, and the hemorrhage is almost *nil*. In other cases the hemorrhage is very marked. I saw one case where the patient died upon the table from it. This happened in the hands of a surgeon of highest skill. Therefore I think that the seriousness of an operation depends upon the kind of case it is rather than the operation or the surgeon, and

accidents might happen in the hands of any one.

DR. SHOEMAKER: I was present at one of the operations reported, and was very much pleased with the skill of Dr. Roberts in managing the hemorrhage by carefully securing the bleeding vessels. It was one of those thyroids which are not very adherent, and did not descend much below the border of the sternum. The special point of interest to me was in seeing how easily such growths come out when skillfully attacked.

DR. DAVIS: If these were cases of intracapsular enucleation I would be much interested in hearing about the bleeding and how it was controlled. The substance of the thyroid gland and veins in these cases is so extremely friable that it is almost impossible to control the bleeding by the application of hemostats. They simply tear out; they will not hold at all. Dr. Wolff, of Germany, advocated the intracapsular enucleation of the enlarged thyroid gland, and the method he recommended was practically to bite away the growth piecemeal, controlling hemorrhage as you go along by means of pressure. It takes exceedingly skillful manipulation to perform a thyroidectomy without hemorrhage by such a method, and most of the other surgeons who discussed his paper preferred the ordinary method of Kocher.

DR. ROBERTS: I did not work inside the capsule, but principally outside. I cut down outside of the capsule and shelled out the tumor. The operation was extracapsular except where the capsule was accidentally cut through during the operation. Of course, the goitres are much less large with us than the goitres seen in Europe. In the greatly enlarged glands the vessels are increased in number and size, as well as the tissue elements. I have seen a comparatively large number of goitres at the Woman's Hospital, and I have refused to operate upon a good many of them. It seems to me, however, that where there is dyspnœa or pain from pressure upon the vessels or the nerves by the growth it is proper to operate. In many cases relief can be obtained by medicine, and if we can succeed in taking the patient's mind off from the goitre the enlarged gland will give less trouble. The cases reported, it appears to me, were proper ones for operation. With regard to Dr. Taylor's question, I have seen profound collapse during an operation upon the neck, although not in a case of goitre. There was sudden stoppage of breathing and serious circulatory disturbance. I found that I was making pressure upon the pneumogastric nerve; as soon as I relaxed it the breathing became normal.

Dr. Muehleck presented

A REPORT OF FOUR CASES OF DIPHTHERIA TREATED BY ANTITOXINE.

(See page 756.)

DISCUSSION.

DR. H. A. HARE: I had the honor of being invited to be present at the Municipal Hospital when the inoculations were made by Dr. Fischer, of New York; but think that I have very little to add to the report of Dr. Muehleck. There are, however, several things which impressed me very forcibly at the time of making these experiments, which I have not had time to clear up. One was that the cases were desperate ones, fairly rotten with sepsis; you could scarcely believe it possible that children could survive such profound poisoning. Some of them were simply gasping for air, not from obstruction but from prostration of the vital powers. Some had as much as 60 per cent. of albumin in the urine, the pulse was indistinct and could scarcely be found at the wrist; while the most careful auscultation was needed to distinguish the heart-sounds. Such cases were among those that received the injections, as I have said. What the result is it is too soon to say, but I was impressed with the thought that the test in these cases could only end in failure. If the treatment could be given at an early stage, before the kidneys, the heart and the other important organs had become so seriously involved, it may be useful. Dr. Fischer thought the cases desperate, but declared that the severe cases were the most favorable for the test. In one case he used an Aronson's solution, which was three times as strong as Behring's. I believe that one of the patients who received the antitoxine is still alive and in about the same condition; the other case I have not heard from.

Now if, as we all believe, diphtheria is primarily a local disease caused by infec-

tion with the bacillus whose growth causes the development of toxine, I am free to confess that I would rather take my chances with the toxine than to inject any amount of immunizing serum into my blood. The child has not only to struggle against the toxine of the Klebs-Loeffler bacillus, but also the toxines of the other bacilli, which cause so-called pseudo-diphtheria, and of the ordinary bacteria of inflammation and suppuration, and the use of antitoxine may, for all we know, increase the strain on the organism.

Dr. Carl Frese, from the German Hospital, by invitation, gave his experience with antitoxine. He said: I received some serum from Charles H. Meyer, German Consul in Philadelphia, directly from Behring. The first case it was tried upon was a case of Dr. Woodward's. It was in a family where three were attacked by diphtheria. The second case was the only one in which it was tried. The child was in a desperate condition and died three hours after the injection. We made cultures and found the Klebs-Loeffler bacillus, also staphylococci and streptococci. The third child was just beginning to get sick, and nothing was seen in the throat of false membrane. In that case the child had been exposed to the infection. We used one-tenth of a bottle of the antitoxine, and the patient got well of her malaise without developing any membrane. Another case at the Municipal Hospital, by invitation of Dr. Welch, was very bad the fifth day of the disease, and he said that from his experience it would die. We gave it an injection of 1,000 normal units of the antitoxine, and the child is living yet, a week afterward. The last report was that the child was doing better, but the pulse was still weak. Another child, who had been brought in on the same day, he thought might not recover under ordinary treatment. This case was also treated with antitoxine and recovered. The mucus from the throat of each of the children was examined and found to contain the Klebs-Loeffler bacilli.

Dr. Edwin Rosenthal: There is nothing that interests me as much as the therapy of diphtheria; and it was with peculiar care that I followed the experiments of Dr. Muehleck as he described them to me, with their satisfactory results. In the statistics presented this evening on the treatment of diphtheria by antitoxine, the greatest proportion of recoveries was shown in cases where the treatment began on the first day of the disease. These statistics were classified peculiarly, and had reference to the number of days the patients were ill before the treatment was begun, as the first, second, third and fourth day of the disease. They had no reference to the gravity of the disease nor the complications. As such their value must in some way be diminished, for we all know that cases of diphtheria seen early enough can be so treated that the infection becomes modified and recoveries be the rule. For this reason the old method of treatment might be classed as equally good; and many a physician, notably my friend Dr. A. Klein, who has seen many cases of diphtheria, has a record of no deaths. I should believe that in those desperate cases —such a one as described by Dr. Hare—the real efficiency of antitoxine can be tested. But, nevertheless, the cases reported by Dr. Muehleck this evening have proved that its use prevents the full development of the disease, and if developed improves the gravity of the symptoms to a remarkable extent.

Regarding the statistics of the cases upon which tracheotomy was performed, I, for myself, cannot see anything remarkable, as I think the statistics of Dr. Wharton with the present plan of treatment equally as good; however, if with one or more injections of antitoxine the course of such cases can be shortened, we have assuredly a good remedy. In Dr. Muehleck's paper no mention was made of those cases of laryngeal diphtheria intubated and treated by antitoxine. All the statistics I have seen on this special subject have recorded no deaths—surely a record which places antitoxine foremost as a remedy. The first case in which Dr. Muehleck used the injections was one of laryngeal diphtheria, and I was present when he made his first injection, using the serum of Aronson, manufactured by Schering. Though the stenosis was marked, intubation was not practiced; and on the second night, when suffocation appeared imminent, Dr. Muehleck, at the suggestion of Dr. Klein, still postponed intubation, but gave a second injection; and this case recovered. This recovery was deemed by Dr. Muehleck due to the employment of

the remedy, for no other special means was employed; surely another demonstration proving its efficacy.

Last June I wrote to Sanitäls Rath, Dr. A. Baer, of Berlin, for some antitoxine. His position is such that it gives him peculiar opportunities to be well posted in sanitary matters. Through him, on a former occasion, I was enabled to receive a supply of Koch's tuberculine, and probably the result of those experiments prompted him to write me to wait further development. On the 2d of October I received a letter from him in which he wrote me that the excellent monographs presented at the International Hygienic Congress at Pest and the Naturwissenschaftliche Versammlung at Vienna have pronounced in favor of the antitoxine, so its usefulness may be regarded as established.

DR. A. KLEIN: The cases referred to by the last speaker were mostly mild cases and would have recovered under any ordinary treatment. The cases I have seen with Dr. Muehleck were of a different type entirely. In the first one, stenosis was so marked that intubation or tracheotomy was considered, but in order to give the antitoxine a fair trial we decided to give a second injection and to wait with surgical interference till the symptoms would grow more urgent. The case as reported got well.

In addition to the statistics referred to to-night which are in favor of antitoxine, I would mention 35 cases treated by Dr. Bokai in Budapest with antitoxine *exclusively*, of which 19 were of the most severe type; 16 of them had to be intubated. Of the 35 cases 8 died; of the intubated ones all recovered.

The *Medical News* (November 17, 1894) reports another case of diphtheria of the most severe type, with extensive membranous deposits all over the pharynx, treated with antitoxine by Dr. Catlin, of Brooklyn, which recovered. In this case the Klebs-Loeffler bacillus was found twenty-one days after the recovery.

DR. D. BRADEN KYLE: I can add nothing to the observations already stated as to the clinical effects of antitoxine, but I might add something in regard to the examination of cases for the bacilli. What has been said in regard to the presence of other organisms is quite true. In all the cases I have studied where streptococci were present the case was more malignant than if the staphylococci were found; as a rule, many germs are present besides the Klebs-Loeffler bacillus. The germ of false diphtheria (von Hoffmann's) is so much like the germ of true diphtheria that it may be necessary to resort to the inoculation of animals to make the diagnosis. Inoculations made on blood-serum and incubated, the first growth to appear on the surface of the serum is, as a rule, the Klebs-Loeffler, and in most cases the diagnosis can be based on stains from these growths; only in the older cultures is there any marked difference.

The serum of Aronson is of several strengths: one preparation labeled diphtheria antitoxine is not intended for treatment of diphtheria, but for the purpose of immunization. At the request of Dr. Morton I have with me a number of microscopic slides showing the germs from tubes eighteen hours after inoculation and also from older growth, from which the marked variance in form can be observed. These are now ready for examination.

DR. T. XAINE: With regard to the so-called pseudo-bacillus I would remark that some German pathologists deny that there is any difference. Some French authorities, on the other hand, affirm that there is a distinction, that the pseudo-bacillus is shorter and grows more rapidly in cultured media. It is also asserted that it may be found in the throat during perfect health, and in the throats of individuals living in communities where there never had been diphtheria. It is said that the pseudo-bacillus is found in 15 or 20 per cent. of healthy children, and that the virulent bacillus may lose its virulence, but by culture in suitable media this may be restored. Four days ago I injected into the trachea of a rabbit 1 c.c. of a solution of the Klebs-Loeffler bacillus bouillon culture. The rabbit had symptoms of dyspnœa yesterday. He had a beautiful membrane throughout the larynx down to the bifurcation of the trachea. On making cultures of the bacilli I found that they had regained their virulence and former thickness. I think that in New York they do not recognize any distinction between the true and false diphtheritic bacillus, and consider them all as diphtheria germs. I think that Dr. Abbott also does not believe that there is any difference between the true and false diph-

theria bacillus. As regards streptococci and staphylococci, they are always found in the mouth and their presence only indicates a double infection.

DR. MUEHLECK: I think that every experienced physician will agree with me that there are very few chapters in medicine more disappointing than the treatment of diphtheria. In fact, the treatment until now has amounted to very little, it being always a question, in my mind, whether the patient was not more injured than benefited by the attempt to make applications of disinfecting solutions to the throat in a struggling child with a weak heart. The results from surgery have been even more desperate. Anything, therefore, that will afford a ray of hope should be welcomed with delight. The cases I have seen are too few for conclusive opinion, but the results from Europe are very favorable. Virchow, who is usually very conservative in such matters, has indorsed this treatment. The prognosis depends largely upon the day of the disease when the treatment is begun, as I have already said in my paper. Behring and Prudden have shown that sepsis by streptococcus invasion is common in the later stage of the disease. The formula distinctly states that the antitoxine is powerless against such infection.

AUTO-INFECTION.

The subject of auto-infection is one which the physician may study with great profit, both to himself and to his patients. It is the direct offspring of bacteriology, but is not, by any means, the first time error has given birth to truth.

By auto-infection we mean the pathological manifestations brought about by the formation and retention of poisons within the system; and to thoroughly understand the subject we find necessary a knowledge of the normal chemistry and physiology of the body.

In perfect health a certain percentage of poisonous excreta is formed, and this the organism can safely dispose of within certain limits; but when, through unhygienic living, this percentage is daily increased, the depurative and eliminating organs become paralyzed and later diseased through overwork, and we have the supervention of various pathological phenomena from the accumulation of poisons in the system.

Thus it is with Bright's disease. A man appears in fair health. He is attending to his business and seldom complains. His blood contains more than the normal percentage of poisons; his liver and kidneys have been laboring for the past year or more to discharge this additional work; they are almost exhausted and the man is in the position of a boiler about to explode. He has had some warning because nature is just, although severe.

He has had frequent dyspeptic attacks to which he paid no heed; he has suffered from violent headaches, painful vision; he is breathless upon slight exertion, his heart wobbles uncomfortably; his hair has begun to fall, perhaps, but what of it? He is forty-five or fifty years of age and these are the inevitable, if unpleasant, concomitants of coming age.

And so the explosion comes. Monday he is seen on the street; Saturday he is dead. The physicians assure the grief-stricken family and friends that the disease had been coming on a year or more and had gone beyond medical aid; that had he consulted them earlier he might have been saved.

This is poor consolation, but it is true. Doctor, educate your patients, educate yourself. Teach them to come to you early before a disease has gone beyond the resources of medicine, and study the subject of auto-infection to its utmost ramifications; you will find in it the source of two-thirds of the diseases, if not all. Its manifestations will vary with the nature of the poison, its quantity, the age, condition, vital resistance of the patient, etc., and the chief problem will be to ascertain the influential factors in each individual case.

PERISCOPE.

IN CHARGE OF WM. E. PARKE, A.M., M.D.

MEDICINE.

Growing Pains.

Growing pains, defined as pains in the limbs caused by and during rapid growth and sometimes so severe as to give rise to growing fever, have been diagnosed by the author less and less frequently as the years rolled by, until the vanishing-point was reached. Cases which have been classed together under this name are the following:

Myalgia from Fatigue.—This is the commonest variety, usually about the knees and ankles after unusual exertion. They are probably due to auto-infection brought about by excessive production of *effete* materials in the blood and their inefficient elimination. Elevating the limbs and rubbing with the palm of the hand in a direction toward the heart, relieving venous stasis and facilitating a supply of healthy blood to the exhausted muscles, promptly relieves the pain.

Rheumatism.—This is second, if not first, in frequency. There is slight pain in the joints, little or no swelling, and very mild fever, and hence the true cause is not recognized; but rheumatic endocarditis frequently develops in these cases.

Diseases of Joints and Bones of the Lower Extremities.—Cases of hip-joint disease and suppurative epiphysitis of the upper end of the fibula, diagnosed by the laity and allowed to go on untreated, are related under this heading.

Fevers, accompanied by pains in the limbs, in one instance proving to be inception of typhoid fever, constitute this class.

Adenitis.—Here, again, the mother still supposes that the lad of sixteen years suffered from "growing pains," but he was treated for gonorrhœa and a sympathetic bubo.

The malady "growing pains," with its frequent concomitant growing fever, like its congener disorders of dentition, as a separate morbid entity exists principally as an article of faith. The complaint still maintains, however, a strong hold of the lay mind, and forms an extremely common lay diagnosis which is often the cause of much suffering, and even death, by leading to the neglect of curative measures at a time when they are most effective.—*P. B. Bennie in Arch. Pediatrics.*

Neebe's Treatment of Sweating Feet by Crude Hydrochloric Acid.

When the feet are very tender, especially in hot weather, treatment is preceded by an eight to ten days' application of talc powder, which is sprinkled in the stockings. The application of the acid is made in the evening. The crude hydrochloric acid is poured into a flat vessel of stone or glass or porcelain sufficiently large to receive the two feet. Since the soles of the feet and the skin between the toes are the seat of the trouble, sufficient hydrochloric acid is poured into the vessel to completely cover the soles. It should not be allowed to come in contact with the skin of the back of the feet. The heel is kept in the acid for five minutes; then the sole of the foot for ten minutes. After this the feet, especially the skin between the toes, are washed in soap and warm water. Soaking in the acid must be at once stopped as soon as pain is excited, and the painful spots must be treated with zinc ointment until healing is complete. The process of soaking may be repeated twice weekly, and continued for from five to eight weeks in obstinate cases.—*Med. Press and Circular.*

Treatment of Croupous Pneumonia.

Kiad, in a paper published in *The Practitioner*, confines his remarks to two remedies—opium and strychnine. He says that to him the only definite contraindication to the use of opium is furnished by symptoms of impending exhaustion of the respiratory center—shallow, labored respiration, drowsiness and a tendency to cyanosis. While not a drug to prescribe in a routine way, it is not denied that excellent results may be adduced in favor of such a practice. The chief indications for giving opium, with the reservation just mentioned, seems to be severe pain that cannot be controlled by other measures, insomnia, restlessness and delirium. While it is not claimed that these symptoms should always be treated by opium, they may be often effectually and always safely so treated at any stage of the disease. The drug is generally best given in one full dose at bedtime—say 10 grains of Dover's powder or $\frac{1}{4}$ to $\frac{1}{2}$ grain of morphine hypodermatically. Under this treatment, which was in some cases continued from the beginning of the attack to the crisis, the number of respirations was generally reduced by ten or twelve in the minute, the pulse being either unaffected or exhibiting a transitory reduction in the number of beats. No marked effect on the expectoration could be traced. In the use of strychnine he supports the views of Habershon, who holds that its efficacy is due to its action being exerted on the excito-motor-nerve apparatus of the heart and on the respiratory center. The action of strychnine brings indirect support to the view that in pneumonia what we have to fear is the influence of toxines on the nervous system. On this hypothesis cardiac failure is only an expression of exhaustion of the nerve centers and is therefore an indirect effect of the poison. It is best given hypodermatically directly into the gluteal muscles in doses of $\frac{1}{60}$ grain, the indications for its use being derived from the pulse. If the tension begins to sink or if the

frequency of the beats is much increased, it should be tried at once. Its good effect on the pulse and the respiration is often manifested in ten or fifteen minutes. When the rally is not maintained the above dose may be repeated every two hours until three or four doses have been given, and then o nce or twice in the twenty-four hours until the pulse and respiration right themselves. In the treatment of delirium strychnine often acst more beneficially than alcoholic stimulation.

PATHOLOGY.

Clinical Value of Renal Casts.

Many clinicians can recognize casts under the microscope but fail to interpret their significance. Dr. A. E. Austin, in the *International Medical Magazine*, separates them into definite groups and draws inferences accordingly. The hyaline and blood casts merely indicate irritation and hyperemia. Closely associated with hyaline casts is amyloid change of the kidney due usually to suppuration and with a good prognosis if the source of suppuration be removed. Epithelial, granular and fibrinous casts indicate acute inflammation of the renal tubules, the epithelial cast pointing to the mild stage; that is, one of mere desquamation with urine slightly under normal in amount, specific gravity 1030, high color, albumen a trace, numerous hyaline casts, free blood and renal epithelium. This may go on to brown or pale granular casts with diminution of the solids of the urine. The fatty and waxy casts when numerous and persistent indicate long-continued chronic inflammation of the kidney with bad prognosis. Blood and epithelial cells are absent. In this case the urine is diminished in amount with increased specific gravity. The pale, granular and small hyaline casts point to fibroid kidney. Aside from the microscopical appearance, the general condition of the patient, age, sex and previous history must be taken into consideration. It should be remembered that the diagnosis of casts alone may mean little, but the kind of casts in abundance is the important point.

The Causes of Narcosis-Paralysis.

Under the name narcosis-paralysis, or pressure-paralysis, the Germans group those cases which occur after narcosis, or long-continued lying in one position. Primary cause: They occur most frequently in the arm after operations, during which the limb has been kept elevated for long at a time. Braun has considered them to be due chiefly to the clavicle pressing the brachial plexus against the vertebral column, and to the direct pressure of the head of the humerus on the nerves. More recently Gaup (*Centralblatt f. Chirurgie*) has claimed that the nerves are compressed between the clavicle and the first rib; possibly also, in certain cases, between the clavicle and the scalenus muscle. In any event, the occurrence of these cases is a warning not to keep the limbs in constrained positions any longer than is necessary during operations. Pernice reports a case where a paralysis of the radial nerve, lasting, unimproved, till the patient's death (three weeks), occurred, probably from the forearm happening to lie against the edge of the table at the point where the nerve turns around it.

Menstruation and Infection.

The connection between erysipelas and infectious peritonitis has long been considered intimate, and there is now good ground for the belief that from a bacteriological point of view the two diseases are identical. In the *Presse medicale* for September 29th there is an interesting communication from Dr. Henri Meunier, a hospital interne, giving an account of a fatal case of peritonitis which suddenly attacked a healthy young girl under somewhat peculiar circumstances. She was a domestic servant, and her mistress was seized with severe facial erysipelas. The young girl took an active part in nursing the sick lady, was almost constantly at her bedside, and personally attended to changing the applications to her face. While this was going on the girl's menstrual flow appeared and she committed the imprudence of using as a menstruous napkin a cloth that had been used in a dressing for the lady's face. She was suddenly seized with a violent chill while out for a walk, also with malaise, head ache, general depression, and soon repeated vomiting. Her courses, which had appeared two days before, were brusquely suppressed. Her death followed in the course of five days, and the post-mortem examination showed conclusively that the disease could have had no other origin than by infection from the napkin. The case is recorded with all the details, and the author's remarks on it are well worth reading in full.

DIETETICS.

Home-Made Beef-Powder and How to Prepare It.

Dr. William R. Huggard (Davos Platz, Switzerland) writes in the *British Medical Journal:* Some of the beef powders in the market smell and taste of the chemist's shop, and are not readily taken by an invalid whose palate requires to be coaxed. A happy idea struck the writer several months ago that beef-powder might without difficulty be prepared fresh and on a small scale by any ordinary cook. The experiment was made, and the result was satisfactory beyond expectation. Beef-powder made at home is appetizing, has a delicate aroma and flavor, and can be taken with pleasure by invalids who turn with aversion from ordinary food. If a little pepsin be taken at the same time, it is digested even when the ordinary peptonized foods are not retained.

The mode of preparation is simple. Lean beef is cut into small pieces; these are put into boiling fat, dripping, or butter for a couple of minutes until the surface is browned. They are then removed from the fat and placed on a strainer for a few moments. Afterward they are placed in a mincing-machine. The resulting mince is placed in a slow oven and dried. The drying process may take from five to twenty-four hours, or even longer, according to the heat employed. When thoroughly dried the meat is quite crisp, and can be ground in a coffee-mill that has not been used for any other purpose. In the drying process the meat loses a trifle more than four-fifths of its weight. This beef-powder can be taken in various ways—with hot water or soup, with mashed potatoes, with bread and butter in a sandwich, or with a little pepsin in a starch wafer. The writer has given this home-made beef-powder with such excellent effect in several cases where there was much difficulty with food that he thinks others may find it useful.

Beef-powder, carefully prepared according to the directions above given, has an agreeable flavor, and admits of being used like potted meat by persons of delicate or fanciful appetite. By regulating the heat applied in making the powder the albuminous constituents need not be coagulated, but merely dried, and the digestibility of the powder would then be increased; in any case, the finely divided condition would facilitate digestion. A very good beef-tea may be made from the powder by infusing it in moderately hot water. For the preservation of the powder it would be necessary to keep it from contact with atmospheric air and to avoid the access of mites or similar deteriorating influences.

Boiled Milk as an Aliment Abroad.

The practice of subjecting milk to boiling heat before consumption has been widely adopted in European countries, whose public hygiene has hitherto been such as to counsel every means of minimizing the conveyance of infection. British travelers, in Latin countries especially, will be reassured by this salutary innovation, experience having taught them that the milk supplied in hotels and pensions and added to their morning meal of tea and coffee has too often been tainted with the micro-organisms of infectious or contagious disease, chiefly from being diluted with impure water, not seldom containing the desquamatory *debris* of convalescents from scarlet fever. Sanitary truth progresses slowly into these regions, and when the public health officer at length succeeded in establishing the unwelcome fact that milk was one of the surest channels by which infectious diseases were diffused, he had to encounter the objection that the boiling process to which he insisted on its being subjected deprives it of its nutrient properties and also its digestibility. Again, however, he has been able to show that reason was on his side, and that milk after boiling is not only more easily digested, but has actually a higher nutrient value than in the crude state. We allude especially to Dr. Chamouin's experiments, in which he fed a number of kittens on boiled milk and an equal number of kittens on the same milk as it came direct from the cow or goat. Those of the former category he found to be twice as fat and healthy as those of the latter. Following up this demonstration, Dr. Chamouin examined the statistics officially issued by the town council of Paris as to the infantile mortality of that city, and finding that the chief cause of this was, directly or remotely, intestinal ailments, he prosecuted his researches still further, so as to include a comparison between those infants that had been fed on boiled and those that had been fed on unboiled milk. As he anticipated, he found a remarkable diminution in the death-rate of the former. His investigation was continued long enough to show that thousands of infants are annually safeguarded from intestinal disease and death by the precaution of boiling the milk on which they are fed.—*London Lancet.*

SURGERY.

Sterilization of Catgut by Boiling in Olive Oil.

Eastman (*Annals of Surgery*) experimented with the sterilization of catgut by means of hot olive oil. The following are his conclusions: Catgut can be rendered sterile by heating in oil to a temperature of 212° F. for three hours. The method is reliable, cheap and rapid. The quality is not impaired, and gut so treated is more satisfactory as to strength and smoothness than if subjected to the ether-alcohol-bichloride precess. A higher temperature than 212° F. is not necessary for sterilization and is an injury to the gut. The material should be wound on reels or cylinders and not on anything with sharp edges.

Antipyrin as a Vesical Analgesic.

Vigneron (*Annales des Maladies des Organes Genito-Urinaires*) is convinced from its employment in three cases that antipyrin will prove to be a valuable vesical analgesic. Injected into the bladder the remedy is free from harmful effects, even when employed over a protracted period. As an antiseptic the author believes it to be superior to solutions of boric acid. When the solution of antipyrin is allowed to remain in the bladder, it not only relieves the pain but checks spasmodic contractions. A 4 per cent. solution left in the bladder for ten minutes is sufficient to diminish the pain attending subsequent washing or instillation. Antipyrin may be employed in all cases of cystitis in which local treatment induces pain. When the bladder is not distended, two and a half to five drachms of a 4 per cent. solution, left in the bladder for ten minutes, is sufficient. When the bladder is much distended, fifteen to thirty drachms of a 1 or ½ per cent. solution should be injected and allowed to remain in the bladder.

HYGIENE.

The Nose and Its Hygienic Relation to the Body.

It is no unusual thing to give advice to our fellow-man. To prevent his doing what he is impelled to do by force of nature or of habit, without showing him a better or, rather, the true way of relief, is virtually improper. In this connection the following is suggested: Each human being who claims any moderate amount of cleanliness and care regarding his health will, during his morning ablutions, wash his face, head, mouth, teeth and body, and may do so without ever dreaming that the human proboscis is one of the most uncleanly organs of the body (which fact our forefathers sought to overcome by the use of snuff, etc., but which proved of no avail), and its purification lies, last but not least, in washing the nostrils proper, and this should be done in the following way:

After the completion of the above ablutions and the thorough renovation of the basin used, fill it nearly full of pure cold water; immerse the whole face therein, and by trial learn how to gently snuff water as one would customarily breathe air; a few sniffs may be taken and the face withdrawn if the taking of breath has become necessary, and again immersing the face, repeat the action several times, but mark you, no force must be used. The result will speak for itself in the residue left in the basin, thus proving the necessity for removing the surplus secretions of this organ and avoiding the dangerous necessity of carrying your catarrhal as well as tuberculoid matter in your pocket, not mentioning the sometime contagious results from the laundering of handkerchiefs. The mucous surfaces of the nose thus become accustomed to the influence of the daily temperature by using the water in its normal condition, and many years of practical experience by its disciples has fully demonstrated the efficiency of this system.

All persons subject to catarrh who practically have dry and clear nostrils nevertheless have mucal droppings into the throat, and are often involuntarily compelled to swallow this retroverted mucus.

All this can easily be overcome by the permanent adoption of this system of cleanliness. The strong snuffing up and down of water in the nostrils is too forcible for that sensitive organ of smell, and no nasal douche should ever be used for the same reason. The above gentle flushing system is confidently urged as the most efficient and least harmful method of cleansing the nostrils.—*Herald of Health.*

PHYSIOLOGY.

Anti-Toxic Action of the Liver.

It has been established for some time, says the London *Lancet*, that the liver has a power of retaining certain poisonous alkaloids in high proportion and in their most active state when injected into the circulation. Dr. Schupfer, of the University of Rome, Italy, has now shown by experiments on frogs that by intrinsic action due to the specific activity of its cellules the organ diminishes the toxic power of the alkaloids with which it is brought in contact, not only those introduced from without, but those elaborated within the body, as from disease. The importance of a normally working liver is thus more apparent than ever.

OBSTETRICS.

Treatment of Early Abortion.

A conservative treatment of early abortion is recommended by Schauta, of Vienna, in a recent article. The old rule that pain and hemorrhage combined mean inevitable abortion he does not indorse, and thinks the accident preventable as long as the hemorrhage is not excessive or the cervix dilated. He does not try to check the bleeding and trusts to rest, which is continued for eight days after the last bleeding. In those cases where the os dilates and abortion becomes inevitable, he tampons with a strip of iodoform gauze about two yards long and the width of three or four fingers' breadth. He prefers to retract the perineum with the fingers of the other hand instead of using the speculum, and renews the tampon at the end of twenty-four hours at the least, removing it sooner if the appearance of sacral pains indicates that the ovum has been expelled from the womb. This method of treatment is in sharp contrast to the radical advice so often given of late to go in at once and curette out the womb as soon as an abortion becomes inevitable—a practice which Schauta objects to because of the danger of leaving fragments of membrane behind.—*Western Lancet.*

ARMY AND NAVY.

CHANGES IN THE U. S. ARMY FROM NOVEMBER 18, 1894, TO NOVEMBER 24, 1894.

The leave of absence granted Captain Adrian S. Polhemus, Assistant Surgeon, is changed to leave of absence on account of sickness, and is further extended to include December 26, 1894, on surgeon's certificate of disability.

NEWS AND MISCELLANY.

Routes and Rates to Winter Resorts.

The B. & O.R. R. Co. has just issued a little booklet giving the routes and rates to various winter resorts in Cuba, Florida, North Carolina, Virginia, New Jersey, Pennsylvania and Georgia. The information is very conveniently arranged and indexed. Copies can be had by inclosing a two-cent stamp to Chas. O. Scull, Gen'l Pass. Agent B. & O. R. R., Baltimore, Md.—2t

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ORIGINAL ARTICLES.

A PRACTICAL STUDY OF SERIOUS ABDOMINAL CONTUSIONS, WITH A CLINICAL REPORT OF TWENTY-ONE CASES.*

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[CONTINUED FROM PAGE 750.]

The integumental investment of the abdomen anteriorly is thin and elastic, freely movable and resistant. As its antero-lateral areas are without solid osseous underlying supports, in the application of force the capillaries escape rupture, so that discoloration or ecchymosis, so commonly following contusion elsewhere over bony surfaces, is generally absent in this locality. With the body in the recumbent position, the antero-lateral walls being composed of yielding material, on pressure being applied here they can be forced backward or inward until arrested by the central osseous ridge of the spine. But with the body lying prone on the face and chest, as but a very limited area of the abdominal boundaries is at all exposed, and this is so powerfully protected by the spinal muscles and the lumbar vertebræ, vulnerant force must be great and concentrated to produce disorganizing effects on the abdominal viscera in this direction.

It is well to observe, also, that when a heavy substance is brought to bear on the lumbar region, the body resting prone on its anterior areas, concussive pressure is transmitted through the back and is partly spent on the thorax and pelvis.

*Read at the annual meeting of the New York State Medical Association, October 10, 1894.

FIRST CLASS.

Concussive and Compressive Injuries of the Abdomen, Moderate or Superficial.

The comparative frequency of injury of the various structures and organs of the abdomen will depend on, first, their exposed situation; second, their composition; and, third, the manner in which force is applied.

THE ABDOMINAL WALLS.

Integument.—The structures which enter into the protecting walls of the abdomen and are the first to receive the impact of violence, as we would expect, are those most often implicated by injury. The most marked exception to this rule is the integumental envelope, which extends from the ensiform cartilage to the crest of the pubis and Poupart's ligament, and as far laterally on each side to the outer edge as the lineæ semilunares. Here the skin is thinner than anywhere else in the body, but its mobility and resistance are such that rupture of its capillaries and consecutive ecchymosis are scarcely ever seen, even with very extensive damage to their parts

underneath. The same peculiarity attaches to the skin covering the five lower ribs, and though costal contusion or fracture may occur, ecchymosis seldom appears in many cases until reparative processes are advanced. But over either lateral plane of the lumbar region and laterally over the lumbar fascia and oblique muscles, as far forward as where their fibers terminate in an aponeurosis, vascular effusion into the integument, with ultimate free staining of it, is a common event.

THE MUSCLES.

Striped muscular tissue in every region of the body offers remarkable resistance to trauma, and in none is this quality more manifest than in that which supports and maintains the abdominal contents.

Although some authors maintain that contusions of the abdominal muscles are an uncommon event, my own experience has been to the contrary. The lesions here, of a superficial character, in their order of frequency and importance are:

1st. Simple contusion, with or without sanguinous infiltration.

2d. Sprain.

3d. Laceration or rupture of muscle.

Simple contusions are caused by moderate blows or falls over any of the abdominal areas. Moderate soreness and tenderness follow, which pass away after a few days, as a general rule, without any constitutional disturbances. But when the force is moderately severe and falls are sustained over the ribs which enter into thoracic wings, a most painful and protracted intercostal neuralgia may follow, which is aggravated by motion, inspiration, or any spasmodic action of the diaphragm. The pain and tedium succeeding moderate concussive force applied here probably results from injury to the intercostal nerves. But in time it passes off without leaving any pathological changes in the affected parts.

Sprain or rupture of the abdominal muscles follows a sudden violent stretching of them. Such tension may occur from direct pressure, as when one is caught by some compressing agent, usually either over the hypogastrium or over the lateral lumbar muscles.

For obvious reasons we can understand how an uncomplicated sprain is seldom seen over other areas of the abdomen. In severe sprains the aponeurotic investment of the muscle or even some of its fibers may give way.

These are most often encountered in the lumbar region, and here generally occur in consequence of a sudden lateral inclination of the spine, the affected muscles being subjected to violent tension.

A severe muscular strain is always followed by a distraint and painful lameness in the affected parts, which is slow in being recovered from, though as a rule full functional power, after a time, is reëstablished. Rupture of a muscle with retraction of its ends I have never seen over any part of the abdominal walls, except where mortal injury was associated with it. The rectus is the most exposed to this lesion, and cases are on record in which rupture of it occurred by spasmodic contraction alone.

It is possible certainly that a muscle may be partly or even wholly ruptured without detection. For example, in those whose abdominal muscles are masked by deep layers of fat or when the muscle ruptures within its sheath, when the interspace is slight, and when there is no hernia of its fibers through its thecal envelope. Inasmuch as no case of uncomplicated muscular rupture over the abdominal areas has come under my notice since my practice brought me in frequent contact with traumatic cases, and more than five thousand of various descriptions of traumatism have been examined by me, I am disposed to believe that it is a very unusual complication.

THE APONEUROSIS.

The flat, broad tendon of the external oblique turns on itself below, and with its fellow of the opposite side constitutes the center of attachment, particularly of all the muscles lying over the anterior plane of the abdomen, except at the crest of the pubis, wherein the recti are inserted, and a plaque of the external oblique contributes to the formation of Gimbernat's ligament.

Tendinous structures possess greater resisting power to violence than the muscle, as we observe in injuries of the extremities, when muscles will rupture from violent spasm, or the tendon may drag away the very bone surface into which it is inserted before it will give way itself. As we will see later where contusion of the central organs is considered, the areas of the abdomen covered in

chiefly by aponeurosis are by no means the weakest.

Many attribute their hernial infirmities to blows or falls sustained some time in life over the inguinal areas. In fact, a common impression prevails that this is their usual origin. This is not surprising when we recall to mind the popular term *rupture*, which is applied to hernia and even yet persistently employed by various modern authors.

But in an inguinal hernia there is nothing ruptured or torn, nor does hernia probably ever arise in consequence of blows or falls over the inguinal region. Of this I am assured from an examination of many who have sustained blows over the inguinal region. Nevertheless, if the injured has had hernia in infancy or is the subject of one in the process of growth, there can be no question but violence may hasten its development or impart serious features to it.

SECOND CLASS.

Concussive and Compressive Injuries of the Abdomen, Central and Serious.

While peripheral trauma of the abdomen is not uncommon, deep or central is met with sufficiently often, and is so grave in its consequences as to warrant a careful consideration of it. This is particularly opportune at the present, since aggressive surgery has essayed to treat many visceral lesions of the abdomen by direct intervention. It has been quite generally conceded that operative surgery at present in many pathological conditions within the abdomen is a means more effective in prolonging and saving life than the more conservative constitutional measures in vogue before the time when anesthetics, antiseptics and experimental studies had made it a permissible procedure to open the abdomen in the living subject.

How far similar radical surgical procedures may be utilized in those contusive injuries associated with the laceration or rupture of the organs, it is highly important to determine.

Quality of Physical Force in Crushing Lesions of the Abdominal Organs.

The above may be divided into two varieties:

1. Percussive or concussive.
2. Compressive.

Percussive or concussive force is an etiological factor of great importance in many injuries to the deep viscera, and especially to the solar plexus. The abdomen may sustain the impact of a quickly moving body, as a ball thrown with great impetus, an arrow, a spent missile, or in fact any projectile moving with great velocity, which may reduce a solid viscus to a pulp, rupture the intestine or widely open the vascular structures, and yet leave no trace of injury at the point where it struck the integument.

Thus in one case that came under my care in hospital nine years ago, a burglar was fired on by a policeman as he was escaping through a window. The shots were fired from a thirty-two-caliber revolver at a range of about thirty feet.

After the second shot the burglar fell back into the room. He was immediately sent into the hospital. He was seen by me three hours later. He was now in mortal shock and incessantly groaned from pain in the abdomen. On examination it was discovered that he had apparently been shot in but one place. This was through the convexity of the deltoid, the ball passing completely out. But his urgent symptoms were abdominal. Here, however, there was no discoloration to indicate contusion, though on examination it was evident that he had a large internal hemorrhage. He died six hours after admission. On post-mortem examination the cœliac axis was found widely opened and the jejunum was nearly torn in two just where it emerged at the left under the cardiac end of the stomach.

The cavity of the peritoneum was flooded with blood and intestinal contents.

The sympathetic ganglia and solar plexus receive many communicating filaments from the vagus and the internal terminals of the anterior division of the spinal nerves from the lower dorsal region of the cord.

This may perhaps partly explain why a sudden severe blow over the epigastrium produces such an impression over the cardiac and respiratory centers. There are few males who pass through life that have not experienced that sensation of great distress which follows percussion or a fall over the upper abdomen. The immediate

sensation is inability to breathe for a moment, when it is said one has "had the breath knocked out of him." In the more aggravated cases syncope follows with great prostration and nausea.

Taylor sets this type of injury down as an occasional cause of death; for in writing on the subject he says: "There is no medical doubt that a person may die from shock without any external evidence of injury being found after death" ("Medical Jurisprudence," p. 317, 1880). Mr. Hodgen is emphatic in his statement that death may immediately follow an injury of the abdomen without any external or internal evidence of it being discovered on autopsy.

"There may be," he says, "a slight abrasion or contusion mark on the skin, but these are neither constant nor necessary accompaniments of the blow. Convictions of manslaughter have taken place under these circumstances" ("Abdominal Injuries," Holmes' "System of Surgery," vol. iii, p. 217). Mr. Alfred Poland (*ibidem*), in his prize essay on the subject, said that "the upper part of the umbilical and epigastric regions contains such vital structures, and above all, the solar plexus and its numerous branches, of such high organic importance, covered in by soft parieties, but little capable of receiving or transmitting external shock, that it is not to be wondered at that death may be the immediate consequence of injury in this region." We are told that in the March circuit at Cambridge, England (1857), John Bond was indicted for the murder of his wife. He beat her violently over the stomach with a six-pound codfish. She died almost at once after the first few blows were delivered (Holmes' "Surgery," vol. i, p. 885).

Austin Flint (2d) records a case of death resulting from a blow over the epigastrium. The patient was a young man who had been hit playfully by a fellow-waiter. Flint made the post mortem examination and declared that he could find nothing to account for death ("Human Physiology," revised ed., p. 912). Chavasse in 149 observations on deaths from abdominal injuries reports 36 of them as having been induced by kicks from horses and 13 by kicks from men. Guthrie records the case of a male infant which was projected up in the air about six feet, his father catching him as he came down over the abdomen, his thumb projecting upward. The infant died almost instantly. On autopsy an extensive rupture of the intestine was found (Guthrie, "Principles of Surgery," p. 217).

PERCUSSIVE VIOLENCE OVER THE EPIGASTRIUM AS A CAUSE OF DEATH.

Can a blow on the stomach or anterior abdomen produce death without producing such pathological changes as can be traced or detected afterward?

In this materialistic age of ours, when it is assumed that symptoms are always but the expression of organic changes and when facilities are at our command for purposes of rigorous analysis, it might seem that a prompt and definite answer could be given to this question. Still, truth demands that, however humiliating it may seem, it must be confessed that there is a multiplicity of morbid manifestations which have no tangible, visible organic mutations that will account for them. Their fountain head is the nervous system and vital changes. Possibly those rare cases of sudden death after a blow on the abdomen belong to this category. The anatomical, physiological and vital relations between the stomach, heart and brain are most conspicuous, and these are always most clearly accentuated in what we designate functional maladies. In my search through the authors for evidence to support or refute the assertion that death may follow a blow on the epigastrium, the results were unsatisfactory, for there was great discord of opinion, and in some works by eminent surgeons which were examined this class of injuries was scarcely mentioned.

The general tenor was in the direction of skepticism, and anything approaching a positive opinion could be found in but rare instances.

I could find no author who had ever had a well-authenticated case in his own practice, though there was no paucity of hearsay evidence and ingenious theorizing.

Ashurst says that "since Pollock's researches, it appears doubtful if rapid death can follow abdominal injury; though there can be no question but rapid death may follow those injuries, either from concomitant shock or from a condition of the solar plexus analogous to cerebral concussion; in either case, however, there

would probably be physical lesions after death" (Ashurst's "System of Surgery," p. 391). This statement is so ambiguous as to carry no positive force, for every one knows that certain abdominal injuries are quickly mortal; but they have a definite pathology. The physiological comparison between the solar plexus and the brain will not hold.

Mr. Thomas Bryant ("Treatise on Surgery," p. 278) is scarcely less equivocal on this point. He says that "under certain circumstances a trifling blow on the abdomen may give rise to symptoms of an alarming nature . . . the absence of shock may lull suspicions;" and he adds, "however trivial an injury of this kind may seem, it should be regarded with apprehension and the utmost caution and care manifested in its treatment. How far sudden death is attributable to shock or collapse from a blow on the abdomen without organic lesion is an open question."

Le Gros Clark ("Surgical Diagnosis," p. 207) maintains that shock in itself is not a reliable criterion of how extensive a deep lesion may be, and warns us not to be too precipitate in making a favorable prognosis.

Agnew was reserved on this question.

Dr. Sanborn's case, which occurred in Lowell, Mass., is interesting in this connection. The patient was crushed against the side of a house by the handle of his hand-cart hitting him on the stomach. He felt faint for a moment, but pushed his cart into the shed.

Violent symptoms followed, and he died in forty-eight hours, when a large rent was found in the small intestine (Boston *Medical Journal*, May 12, 1859).

Pirrie believed that blows received over the stomach or duodenum were more dangerous than those in other situations ("Principles and Practice of Surgery," p. 598).

Miller observed that a contusion of the abdomen, though it might leave no visible marks on the integument, yet might do great internal damage; and further, when the deep viscera escaped, the chances were that in consequence of the damage to the abdominal muscles atrophic changes and weakening were quite certain to follow ("Practice of Surgery," p. 216). Le Gros Clark adds that "if the doctrine be true that a blow on the abdomen may cause death, it must be a very rare accident." Holmes practically repudiates the doctrine *in toto* ("Encyc. Surg.," vol. ii, p. 854).

Hunter McGuire, of Virginia, has reported a case of a soldier who was killed by a spent ball hitting him on the belt over the abdomen. On autopsy nothing was found to account for death.

Guthrie believed that violent blows over the anterior abdomen might lead to its ultimate absorption and relaxation, thereby favoring the advent of hernia without rupture of muscle fiber. He cited such cases in his own practice.

Gaut adds his testimony to the probability of blows over the abdomen causing fatal results, and says that "wasting and weakening of the abdominal walls is one of the consequences of severe percussion here" ("Science and Principles of Surgery," vol. i, p. 532).

With a view of determining as far as possible the views of surgeons on the question of contusions of the abdomen in recent times, since surgery of this region has so largely occupied the attention of the profession and operations have been performed on a prodigious scale, an examination was made of nearly all the leading contemporaneous exchanges, domestic and foreign, that have been issued during the past fifteen years.

The most conspicuous feature in the search was the singular paucity of cases chronicled. It may be said that during this period the subject of abdominal contusions has not received the attention which its importance merits.

During that space of time there was no case recorded of death from abdominal contusion of that character which is devoid of pathological lesion.

It may be said that in recent times the general tendency of the profession is to deny the possibility of death from an abdominal contusion, without tangible evidence of disorganization of structure succeeding.

Modern studies, research, experimentation and personal observation all tend to discount and repudiate the assumption that death is possible by a blow anywhere over the abdomen of a man in sound health, without gross structural lesion succeeding.

Mortal concussion of the brain at the present is denied by many of our ablest authors. And concussion of the spine

without serious central changes has been incontestably and conclusively proven to be little more than a mere myth. Probably concussion of the abdomen rested on an equally shaky foundation and has had practically nothing to support and perpetuate it other than the parrot-like practice of the past in copying from one work into another notions which were wanting the stamp of personal observation and had nothing to support them except their hoary antiquity.

CONTUSIVE AND COMPRESSIVE INJURIES OVER THE ANTERIOR WALLS OF THE ABDOMEN, INVOLVING THE DEEPER ORGANS.

Although since 1882 but comparatively few cases of the description here considered have found their way into current medical literature, yet they constitute a considerable share of all traumatisms in every hospital.

They are not, however, by any means as common as injuries of the head or thorax, though an equal or greater surface is exposed. This is because, as heretofore explained, the abdomen is best protected, and owing to its physical composition it is best capable of resisting injury.

The consequences attending or following an abdominal bruise will always depend on various circumstances.

First, the region which has sustained impact.

Secondly, the volume of force and its quality.

Thirdly, the structures involved.

We have but a vague conception of the extent of abdominal resistance and of propulsive power until we have an opportunity to observe it in the parturient act or when we have opened the abdomen in the living man and observed the tremendous energy sometimes required to hold the intestines back when violent retching sets in and all the abdominal muscles are brought into play.

Local abdominal bruises are often witnessed. Blood may be extravasated into the muscle's sheath and cellular tissues, nerves lacerated and tendons strained.

In this class recovery is rapid and full function quickly restored. Parietal lesions of a more serious character may, however, follow later on.

Rupture of the muscle may succeed. In one case, cited by Camper, the rectus was lacerated and the internal epigastric artery opened, the patient sinking in six hours from internal hemorrhage (Camper, "Contusions de l'Abd. Au. Ch.," vol. viii, p. 712).

LOCATION OF INJURY.

Inasmuch as the abdomen is not equally protected, its contents varying in mechanical resistance, in their vulnerable qualities and in their exposed position, it follows that the effects from the same volume of force must vary according to its point of impact. Thus when a blow is delivered over the scrobiculus cordis, over the great centers of the sympathetic or the pneumogastric and in close contact with the cardiac organs, we may expect greater shock and functional disturbances than if the same volume of force was delivered over the loin or elsewhere.

A blow directed obliquely would be capable of less disastrous consequences than one aimed directly over the median axis of the abdomen in the direction of the vertebral columns.

Violence applied over the walls of the thoracic vault of the abdomen, when not too great, is reflected back by the elastic lung and ribs.

It is probable that pure concussive force, however applied to the abdomen, is often so diffused as to impinge equally on all the floating viscera.

But with the *direct compressive* quality, as will be seen, the damage is sustained at a point in close vicinity to where violence has been inflicted.

Indeed, there is no proof that there ever are disorganizations of the viscera by *contre coup* force in abdominal injuries as we often witness them within the skull.

VOLUME OF FORCE AND ITS QUALITY.

It is clearly evident that in all abdominal as other injuries, much depends not only on the volume of force, but the manner in which it is applied.

Percussive force, as kicks or blows, derive their destructive quality from their velocity, concentration of action and the limited area of their impact.

Hitting a hollow viscus which is distended with gas or liquid, as the small intestine, the bladder or stomach, may cause a rupture of it.

This same quality of force when brought to bear on a solid organ shivers or lacer-

ates it, reducing what it strikes, perchance, to a pulp.

Compressive force is slower in action and probably attended with less danger to life than the former. Owing to this characteristic, movable organs are permitted to shift into such situations as will afford them most protection, besides adapting themselves to best resist danger.

This perhaps may explain why the distended stomach and intestine so often escape after great weights have passed over the abdomen.

But the effect of a crush, as in a buffer accident or under other circumstances, is widespread and produces a lesion which involves a whole organ and contiguous structures.

Thus in a man crushed by a loaded cart-wheel, under my care a year ago, there was coincident laceration of muscle, omental hemorrhage, rupture of the ilium and contusion of the right kidney. The shock following compressive injuries is sometimes very great, though in my experience it is not so dangerous as that seen in contusive variety.

IMPORTANCE OF STRUCTURES INVOLVED.

If we proceed from above downward, we will observe that the spleen and stomach are so situated as to best escape force, the latter particularly when collapsed and contracted.

The liver, too, is well sheltered. The gall-bladder is more exposed and hence is more often damaged. But when great force is applied over the floating ribs on the right side the liver is crowded against the spine and lacerated. Rupture of this organ is serious because of its great vascularity and the danger of mortal hemorrhage following. The same may be said of the spleen.

In the umbilical region the ilium lies close to the abdominal walls and is in great danger in event of injury. Certainly all will depend on whether more than one or two of its coats have given way, and whether the rent is a small or large one; possibly also on whether its leakage consists of gaseous or liquid elements.

The vertical segments of the colon are so well protected that they seldom rupture. When they do their fecal contents excite prompt, septic inflammation.

The kidney is frequently injured. When the trunk is seriously contused, or compressed over the lumbar spine, and when great force is applied over the loin anteriorly, it may also suffer contusion. If, however, it is peculiarly vulnerable, it likewise possesses marvelous recuperative power; but when its large blood-vessels are opened death may follow by rapid exsanguination, the blood draining off either by way of the bladder or infiltrating into the connective tissue.

The organs of the pelvis are safe from harm unless their osseous shell is crushed in or they are distended and rise in the abdomen, as do the impregnated uterus or the enlarged bladder. Rupture of the bladder when the tear is completely through all its coats and intra-peritoneal is a serious accident, though it is a rare one which but few ever witness. The ureters, chyle ducts, pancreatic duct or the thoracic duct are sometimes ruptured, when the more superficial organs entirely escape.

A case of rupture of the common bile duct has come under my care which was caused by the patient being run over. The case ended fatally on the sixth day, and on autopsy a rupture of the common duct was found, though all the other neighboring organs were sound.

A case of rupture of the thoracic duct came into my service last year, caused by a run-over accident, the patient recovering.

Traumatic rupture of the ureter has been reported.

The vascular system is nearly always implicated in serious abdominal injuries, and the presence of a large hemorrhage in many is a contributory cause of death.

[TO BE CONTINUED.]

Unsuspected Qualifications.

"Your daughter," said the manager in apologetic tones, "while she may become pleasingly proficient, will never be a great singer."

"Oh, that's all right. You don't know her yet—she shocked four communities before she was 16."—*Washington News.*

A Large Variety.

Teacher—Johnny, you may describe Chicago's climate.

Johnny—Which one?—*Chicago Record.*

IS THE ACCEPTED CLINICAL PICTURE OF GASTRIC ULCER CORRECT?*

A. L. BENEDICT,† A.M., M.D., BUFFALO, N. Y.

The ordinary conception of gastric ulcer is that it occurs by preference in females, especially in anæmic young women under twenty-five or thirty, and that it is attended by superacidity.

From Ribbert's series of 3,476 autopsies in Zurich and Nolte's series of 3,500 in Munich I have computed the following table, showing the average proportion of gastric ulcer in 10,000 miscellaneous corpses, equally divided between the two sexes. As so few cases occurred in childhood, I have appended a column, computed from actuaries' statistics, showing the number of deaths in each decade, starting with 10,000 persons at the age of ten. The same proportions ought to hold good for the ages of a miscellaneous collection of 10,000 corpses as if we followed any particular group of 10,000 to the time of their death.

Stoll shows that the greatest mortality from gastric ulcer (or at least the greatest number of ulcers found post mortem) occurs in the fifth decade of life, and nearly as many in the third, sixth and seventh decades. Considering, however, that more and more people die in succeeding decades up to the ninth (see fifth column of table), a slight modification of Stoll's deductions is necessary. The last column of the table shows that the liability to death with, if not from, gastric ulcer reaches its maximum about the age of forty and diminishes almost equally as we ascend or descend from that number.

CASES OF ULCERS.

Age.	Male.	Female.	Total.	Probable No. of Corpses.	Percentage of Cases of Gastric Ulcer in Each Decade.
Fœtal	1	0	1	0	0.0
10–20	2+	7	9	600	1.6
20–30	7+	10+	18	700	2.6
30–40	12+	21	33	800	4.1
40–50	18+	18—	36	900	4.0
50–60	12+	19	32	1,300	2.5
60–70	4—	24+	28	1,900	1.5
70–80	5	15+	20	2,300	0.9
80–90	1+	0	1	1,300	0.08

As regards sex, Ribbert found 2.59 per cent. to be the liability for females; 1.83 per cent. for males. Nolte's proportions were 1.23 per cent. and 0.8 per cent. respectively. It will be noted that from the tenth to the fortieth year males are more prone to violent deaths than females and, conversely, are less liable to disease. In the fifth decade, when the two sexes lead similar lives the relative frequency of ulcer is practically equal. The preponderance of ulcer in old women is, I believe, partly due to the fact that after middle life there are more women living and, paradoxically, more dying than

* The writer disclaims all originality of research in this article, which is based on one of Dr. August Stoll, of Zurich, published in the *German Archives for Clinical Medicine*, October 26, 1894. Dr. Stoll, in turn, acknowledges his indebtedness to a number of authors to whom due credit is given as they are here quoted. The extreme length of Dr. Stoll's article—which would fill an entire number of THE REPORTER except the pages devoted to miscellany—prevents its appearance as a translation.—A. L. B.

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men. Thus gastric ulcer is not preëminently a disease of youth and the female sex, but of the middle-aged of either sex.

In comparison with the statistics of autopsies, the following series of Eichhorst at Zurich is of interest. His 90 cases were diagnosed clinically, all but 18 recovering. Of 7,720 male patients, 55 had gastric ulcer; of 4,625 females, 35 had ulcer; 71 per cent. and 73 per cent. respectively. I have added to this table a column showing approximately the percentages of a miscellaneous population between the tenth and seventieth years as they would fall into decades. It is by no means certain that a similar division of hospital patients would show the same not been altered to show proportions in 10,000 cases. Considering that almost equal proportions of male and female patients had gastric ulcer, it was not thought necessary to adjust the table to a scale of 10,000.

Stoll concludes that latent cases of ulcer are rare. Of the 90 patients, 25 were not incapacitated till the time of pronounced hemorrhage, but all had suffered from some form of gastric disturbance.

It is difficult to depict any clinical type. Stoll found constipation in 32 cases; coated tongue in 25; diminished appetite in 21; albuminuria in 5; indicanuria in 16; very good appetite in 8; diarrhœa in 6; family history of stomach trouble in 12. Not one of these observations is of

EICHHORST'S SERIES.

Age.	Number of Cases.			Percentage of Whole No. of Cases of Gastric Ulcer by Decades.	Percentage of Population by Decades, excluding all under 10 and over 70.
	Male.	Female.	Total.		
10–15	0	0	0	3.3	21
15–20	2	1	3		
20–25	3	6	9	32.2	19
25–30	13	7	20		
30–35	8	8	16	30.0	18
35–40	7	4	11		
40–45	6	2	8	21.1	17
45–50	8	3	11		
50–55	4	1	5	10.0	14
55–60	3	1	4		
60–65	1	1	2	3.3	11
65–70	0	1	1		

percentages, so that the comparison is a very crude one. While the second and seventh decades furnish the same proportion of cases of gastric ulcer, it must be borne in mind that there are just about twice as many people living in the former as in the latter decade. It will be noticed that while the autopsy reports showed gastric ulcer to center at the age of forty, these statistics move the maximum point ten years earlier. However, the average age of the fatal cases was forty-three years, the youngest being thirty.

Unlike the previous table, this one has any assistance, either positively or negatively, in the diagnosis of a doubtful case.

Thirty of the 90 cases were examined as to hydrochloric acidity, the examination being only qualitative except in 4 cases and made sometimes after a test-meal, sometimes on vomited matter without noting the time after eating, sometimes on wash-water after lavage. In 5 cases there was non-acidity after a test-meal, one of these cases being a carcinomatous ulcer. In two or three cases (one in which quantitative methods were used and one or two

in which the stomach contents after dilution still showed the phloroglucin-vanillin test) superacidity is clearly made out. The remainder are normal as to acidity, or else the tests were so made as to have no definite value. There are not more than 11 cases in which superacidity is even hinted at. Seven quantitative tests were made in 4 cases, the hydrochloric acidity varying from 1.05 to 3.3 in 1,000, the normal ratio being about 2 in 1,000. Kugel's 18 cases of peptic ulcer showed normal acidity in 8, superacidity in 4, sub and non acidity in 3 each. The most liberal interpretation of these two series, comprising almost 50 cases, would indicate that superacidity, to which so much value is attached in the diagnosis of gastric ulcer, occurs in not more than 20 per cent. of all cases, while the acidity is below par in about 25 per cent.

Absorption, as determined by the administration of potassium iodide in capsule, was shown to be normal in 6 of 28 patients, iodine being found in the saliva after seven to fifteen minutes. In 6 others absorption was delayed to twenty to twenty-five minutes, and in one to forty-five minutes. Personally I am inclined to doubt the reliabilty of this test, especially unless the solubility of the capsules is proved by control tests.

The location of gastric ulcer is at or near the pylorus in 60 per cent. of male cases; on the lesser curvature in 40 per cent. of female cases. Otherwise there is no predilection. Stoll explains the sexual difference as follows: In men the weight of the liver, descending with costo-abdominal respiration, forces the gastric contents repeatedly against the pylorus. In women the lateral constriction of corsets changes the shape of the liver and makes the right side of the stomach—that is, the lesser curvature—bear the brunt of the respiratory impact. Still, not all of the female cases were those of corset-wearers.

In 15 out of 75 cases and in 11 out of 18 death resulted from perforation. In 4 of the former series (seen at autopsy) an open artery was found at the bottom of the ulcer, and in several of the 18 cases death resulted directly from hemorrhage. Other complications are not particularly significant.

One patient, a woman aged forty-seven years, who was in the hospital at Zurich for six months without much change in her condition, eliminated a great deal of urea by vomiting. There was no other indication of renal disease. For example, May 21st the urine amounted to 200 c.c., containing 1.4 gm. of urea; the vomited matter, 1,600 c.c., contained 12.8 gm. of urea. In about 25 examinations the total daily elimination of urea ranged from 2.4 to 15.6 gm., fully half of which was eliminated by the stomach. Considering the emaciation and quietude of the patient, 0.20 gm. would be a normal elimination. It is not definitely stated whether the vomited matter was mainly blood or not, except in one or two instances, when the gastric elimination was slight and when the vomit was only tinged with blood. I have several times noticed that the stomach eliminated urea in renal insufficiency, but in cases of gastric catarrh, not ulcer. The catarrh in these cases was due to circulatory changes, especially chronic congestion.

I believe we may conclude—

1. That gastric ulcer occurs slightly more often in women than in men, but not directly because of their sex.

2. That three-quarters of all cases occur between the ages of twenty-five and sixty, the maximum of occurrence being at the age of thirty, of death at forty. That the occurrence of gastric ulcer, either fatal or not, falls off rapidly as we investigate younger persons, slowly as we consider older ones. That many ulcers that are found post mortem have occasioned no clinical symptoms.

3. That superacidity, while doubtless predisposing to the formation of an ulcer, seldom persists after its establishment.

4. That aside from hemorrhage, pain and tenderness are almost the only diagnostic symptoms that are to any degree reliable.

5. That death from ulcer occurs in a plurality of cases from perforation and peritonitis; seldom directly on account of hemorrhage; in the majority of cases from exhaustion and various intercurrent or complicating affections.

"Our preacher made a big mistake last Sunday and lost a collection," said a Manchester man. "How?" "Well, he appointed a tax collector to go around with a plate and every man in the congregation asked him to call again."—*Tit Bits.*

THE HUMBUGGERY OF THE HUMBUGGED.

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While it is to be admitted that there is still a large field for cultivation in the line of "psycho-therapeutics," and also conceded that there is more than "something" in it, it must be full as readily admitted that the profession is as apt to slop over in the effort and offer and swallow as sense as fair a lot of trash in that line as it has done in the past in some other studies. Advanced as we are in this ninety-fourth year of the nineteenth century, it takes some time to separate the wheat from the chaff, and we have frequent cause for a little blush when we discover how credulous we have been. We admit of many cures through "mental therapeutics" by all sorts of methods and perhaps take but little thought of whether we have not been largely fooled ourselves in the contemplation of the process.

It is an old, old story—that of pilgrims visiting shrines and leaving, as they did at the chapel of Father Mollinger in Pittsburg, "crutches by the cord." The story and romancing of quackery is just as old, while Christian science and faith cure have long held, under some name, a hold on many minds. Some writers in the regular profession only see in it a rational process that can be comprehended by the profession, but not explained to the lay mind, while others look upon it as a process not yet understood and one that the profession should seek to understand and utilize. So the proposition has arisen that the way to combat the "Christian scientist" is to do the same works and explain the process as best we can by study and research.

In this view of the question, let us first remember that just the same cures which the quack and all his allies claim to have done have been done by educated physicians time and again. True they did not claim to do them by "mental cure," hypnotism nor any other mysterious process. They loudly proclaimed by all sorts of advertisements that it was all done *secundum artem*. They asserted (or rather do assert, for there are hundreds of them still in the business) that they were so superior to all other medical men in skill, so far advanced in medical knowledge, that they could do what no other medical men ever did. So far as the general public ever knew, they accomplished that very thing. Their triumphs were just as great, their cures just as good, their clientage just as large, and their fees larger than any of the first classes mentioned. True their course was not and is not considered reputable by ethical practitioners, but the fact remains that they were and are educated physicians and did do and are doing, without any claim to the mysterious, all that the quack, the Christian scientist or any other of the same class do.

It is not an uncommon thing to see a crowd numbering hundreds pressing their way into a hotel to visit a traveling doctor whose diploma was issued by time-honored Jefferson or by Pennsylvania's great university. The lame and the halt, the blind and the deaf, the old, old chronic—all sorts and conditions of patients are there. The "cords of crutches" are left, the deaf hear, the lame walk, and nine out of ten declare themselves better. How many were permanently better is never known; how many fooled themselves and perhaps fooled the doctor is never found out. But we do know that it is the same old scene over and over again, and that on the arrival of the next "great wonder," regardless of name, a great majority of the faces and forms of the afflicted throng are very familiar; they have been, like the "wonder," in the same business many times before.

We pass all this by with a feeling of contempt for both doctor and patients; we say he humbugged them; we see nothing mysterious in the process; and yet when a Christian scientist or quack only imitates the "regular," we are alarmed at the exercise of a power that cannot be explained. There is certainly nothing more wonderful in the one process than in the other, and success, such as it is, largely owing to the same causes. Under a vast proportion of it all from beginning to end is to be found delusion.

Take a common case in every-day practice. A female patient wakes up some morning with "that tired feeling," perhaps a trifle anxious as to the time of

month it is. She takes down the "patent" almanac, and in hunting up a date she begins to read. In half an hour she has found herself possessed of half of the diseases mentioned in that wonderful "manual of health." Before night she is "quite ill" and next morning is taking the first of "six bottles to be taken before cured." She finds in that almanac wonderful cures of as many diseases as sinners ever suffered or that fled at the sight of the bones of a saint. Some new thing, some change in family affairs or environment, happens, and she is "cured,"(?) and that medicine of course did it. This is related to all her friends, and a host of them "feel the same way" and go through the same process. Those who are disappointed in results fly to some new cure, the quack, Christian scientist or the traveling doctor.

Say she goes back to the family physician, and then comes the rub for him. If he tells her the truth, ten chances to one he loses the patient. If he humbugs her and leaves her to her delusion, accepting her diagnosis and treating her on the strength of that delusion, he adds laurels to the crown of the quack. For be it everlastingly remembered that we cannot assert and claim to do what we do not do without opening the door to the worst imposture.

Indeed, it is at least doubtful if quacks and Christian scientists, etc., could have had the glory to which they have attained if educated physicians had been more honest. If we will magnify simple complaints into serious diseases for the sake of making ourselves famous and our pocketbooks fatter, we cannot complain if the quack claims to cure these same misnamed serious disorders. If we humbug the patient, the patient will humbug many others; these in turn continue the process. They don't all go to the original humbugger, but go with his diagnosis to the quack. Some of them get so deluded that the original humbugger fails to cure them himself, by mental therapeutics or otherwise.

To the young man entering an already overcrowded profession the temptation is great to assume a great deal. He has read of the "called-out-of-church" expedient, of the "horse-rushed-out-of-town" dodge, of "tricks of the trade" almost unnumbered, until he feels, in truth, that

> The whole world loves the modest man,
> Whether he be great or small,
> But yields up its plunks in great big chunks
> To the man with a surplus of gall.
>
> The whole world loves the quiet man
> Who's as silent all day as the owls,
> But needless to mention it gives its attention
> To the fellow who gets up and howls.
>
> The whole world loves the peaceful man
> Who sees no occasion to bicker,
> But the full right of way, you'll permit me to say,
> It gives to the strenuous kicker.

"Gall wins," he says to himself, and then farewell to all that was in him of the true physician and all hail to anything, everything that brings notoriety if not fame. He struts down street; he rushes to the drug store with an empty bottle; he slams in and out of the office; every case is extraordinary; the treatment a new departure and every recovery "a snatch from the brink of the grave."

This class of doctors is quite numerous. Some of us smile half in amusement, half in contempt, at the performance, but how few think of how very, very much it all adds to the triumphs of the quack and the disciples of "Mother Eddy."

Again, we grow sarcastic in disgust at the humbugged laity, and seldom care to acknowledge that we have been humbugged ourselves. We say, "They read the advertisement and believed it;" "They swallowed the patent-medicine almanac and got sick." But what about that time that we received a circular setting forth the particular virtues of, say, "Hoang-nan comp.?" We are given a few pointers from a materia medica, the information that "it can only be got in its simple purity and according to scientific formula from Rubs & Dubbs," and that it is just the thing "for those hardly definable cases that so often puzzle the busy practitioner." Then follow certificates (more or less like those in the laity almanac) from various medical men and a few professors and a quotation from a medical journal. We don't stop to read up on "Hoang-nan" or to take into consideration what the "comp." stands for, nor if there may not be something incompatible connected with its use; but we try it on one or two cases "to see how it works." If the patient gets better, then our name too is added to the list of "eminent physicians who commend this remedy." It was the professional bait that was swallowed—that was all the difference between

us and the laity, save that the latter were more excusable. It is all of a piece with the delusions of the deluded who go in crowds to the quacks, the Christian scientists and the educated traveling and largely advertised doctor.

Beneath the humbuggery and delusion lies this: Where an objective mental condition becomes a subjective mental condition, all things are possible to it viewed in the light of its own reflection or that of a stronger mental condition. The great majority of persons cannot be said to really think; many think they think, the few truly think. These last are the only investigators. Again, we are all more or less like sponges—we absorb the element into which we are thrown, and that unconsciously to ourselves. The orator sways his audience at his will, especially if they have gone prepared to be swayed. The quack and the Christian scientist command and succeed with the neurotic case because the patient has placed them in command from the start. The patient goes in the subjective condition. The traveling doctor occupies the same advantage and cures the neurotic case, for at least the time, when you had failed. Put it right down in your mental diary that the most probable cause of your failure was that the patient knew you too well. In spite of all you had done in the family for years, in spite of your successes, you were after all to her a very familiar personage and had become common. All the psycho-therapeutics you can invoke won't do you a bit of good; her mental condition, so far as you were concerned, was not subjective. But go off a hundred miles, fill your office with patients, let that same old client pass through the throng to your consulting-room, and dollars to doughnuts you cure her in great shape.

To a great extent we are all "just so." In certain subjective conditions we receive, we believe, we are controlled. The woman reads the almanac in that frame of mind, the doctor in the same mental shape becomes subjective to the circular. The student swallows all that the professor says, no matter whether it be the vagaries of Samuel Hahnemann, or a revival of the tractors of Elisha Perkins, or the sound common sense of honest Horatio C. Wood. Speaking of Hahnemann and Perkins, it is a valuable piece of history to remember that Hahnemann was opposed violently and even savagely while Perkins' tractors were received with favor by quite a number of the learned regular profession. In London thousands of cures were published and certificates from professors, physicians and surgeons and clergymen added thereto. In Denmark volumes of cures were published by authority of physicians of high standing, yet Hahnemann was a scholar, while Perkins simply humbugged with two pieces of metal. To connect the two periods of then and now we have only to remember that the works of Hahnemann are still used as "text-books" and the theory taught in certain medical schools, while the practice has been largely abandoned by the professed practitioners. Also to remember that the long catalogues of complicated machinery that are advertised (and readily sold) under the head of appliances, splints and instruments exhibit a tendency to slop over in that line in a degree equal to the patrons of Perkins' tractors. Dr. Joseph Eastman's story illustrates this. He says: "The professor appeared before the audience and waved a new medical instrument before them for five minutes and then said: 'Gentlemen, the only reason I have for this exhibition is to say that this instrument cost me eighty dollars and isn't worth a damn.'"

A reader of a pet medical journal gulps down without a struggle all that his patron saint writes, and the doctor who "thinks he thinks" becomes the most conceited man of the lot. Haven't you read an article in that subjective mood, gone out and followed it to a dot, and about a week after, when you were in the objective case, wanted to kick yourself all over your own bailiwick for doing it? I have, and I must be a far more singular person than I take myself to be if many readers of this article have not felt just so.

Again, we grow indignant at the lay advertisements of "Pennyroyal pills" and "cotton-root" mixtures for the prevention of pregnancy, and yet never kicked (except in our mind) when medical journals advertised pessaries and fixtures that had no other purpose and whose use could only produce an abnormal condition of the uterus.

There is little room to expect improvement of the laity in the line of humbuggery until we have advanced beyond it ourselves. I am not in controversy with any of the known or unknown quantities

of psycho-therapeutics, but I do assert that nothing has been done by the "Christian scientist" or any other of his kith or kin but what has been done again and again by educated physicians, and can be done by any one who is willing to adopt the methods. Those methods, however, involve a great deal of deception and the humbugging of the humbugged. I further assert that no reliable proof has been offered that these people ever cured by mental therapeutics a case of a veritably diseased organ or a neurotic case originating in and from a diseased organ.

It is a matter of common knowledge that the average doctor pays either too little or too much attention to his neurotic cases. If able to pay, the tendency is to slop over and become too fussy; if poor, they become a source of annoyance to many, but little attention is paid to them, and they become the prey of the quack. Again, there is that quite numerous class who will not make any effort to pay the local physician (and of course he does not want to spend his time for nothing on cases of that kind), yet always manage to raise a five or ten dollar fee for the traveling M. D., the C. S. and the quack.

But it is a mistake to think that mental cure, or influence of mind over body, is not very largly recognized by the profession. It was so taught even in ancient days, the "placebo" is an old-timer, and bread pills have cured(!) many a patient in years long gone by. It was and is only one of the ways of administering "mental cure." To-day all forms of nerve disorders as well as imaginary troubles are claiming more thought and research than ever before, but the methods have nothing in common with the ignorant quack or the—perhaps—self deceived Christian scientist.

The painful reflection is this, that there are eight thousand physicians in this State alone, and if they were actuated by a common purpose, common honesty and with a common proficiency, what a power against all forms of quackery and medical fraud they could and would be! That they are not so is largely responsible for the success of the frauds; and that they are not so is very fair evidence to the laity that there is something wrong in our general make-up. The remedies for what have justly been called "these abuses" on the part of quacks and all their allies are: first, professional honesty; the setting of our faces like flint against deception of any kind in and out of the profession; a common purpose to raise the moral standard as high as the great responsibility of our calling demands; a common purpose to elevate and help each the other "in the spirit of unity and the bond of peace." Second, a remedy helpful to the end wished for is in (as has been already suggested in Dr. Langsdorf's paper on "Christian Science") appropriate legislation. There are no good reasons for permitting sacrifice of human life by faith curists, any more than by any other class of ignorant practitioners. Third, by the education of the public.

The first can only be accomplished by bringing all fair practitioners into the local, State and national medical societies. The second can only be accomplished by exhibiting to the Legislature unquestionable proofs and instances of life sacrificed through the ignorance of the parties using the method denounced. The last can best be accomplished through leaflets for common distribution and the use of the secular press. To reach people we must use the channels that pass into and through their homes. The State Board of Health has done untold good by the liberal distributions of its circulars and leaflets on sanitation—disinfection, diphtheria, scarlatina, typhoid fever, etc. And the good has been greatly aided, the advice given more generally received, because it bore the impress of the Commonwealth. In short, it came with authority. The power and dignity of Authority with a big A is a great educator. Leaflets should be issued by the Board of Health and also by the State Society, thus carrying with each utterance the authority that commands respect. The secular press should be used by a series of articles from men whose very names demand attention and whose "copy" the press will be glad to get. Above all, let every lesson be taught in plain language for plain people. "University extension" is a laudable enterprise; let us extend its principles to the line of preventive medicine and the uprooting of humbug.

HOAX—I hear Judson is making over $1,000 a day. JOAX—Get out. HOAX—Yes, he is; he's a coiner in the mint.

CHOREA.

W. B. ATKINSON,* M.D., PHILADELPHIA.

Chorea, or St. Vitus' dance, by which name it is so well known among the people, occasionally proves so intractable that fears of grave results are felt. Thus the convulsive movement may become so pronounced as to totally prevent sleep until the child is utterly exhausted.

Recently I have had several cases come under my notice, in each of which sleep was so broken and unsatisfactory that the parents feared for the life of their child. One, a girl aged thirteen years, from the ordinary stature of a girl of that age had suddenly shot up into a tall, thin figure, rapidly losing her power of study, becoming greatly emaciated; in short, showing every symptom as if the waste would speedily cause death. Owing to my absence from the city she had been under the care of another practitioner, and so far as could be learned, every proper means had been employed in the hope of toning her system and restoring her nerve power. But after the lapse of several weeks, upon my return she was brought to me in a pitiful condition. While she appeared to have partially regained her appetite, not the slightest result had been obtained in the control of the convulsive movement. She was so constantly jerked in every muscle that she was unable to stand or walk without support. In eating great care was needed to prevent biting the tongue and choking. From this condition and her sleeplessness due to the convulsive motions it became imperatively necessary to procure rest at once. My prescription was:

Chloral	ʒij
Ext. cimicifugae fld	fl ʒij
Elixir simplicis	fl ʒiij

Sig.: One dram every three hours.

She was directed to take the first two or three doses at intervals of one, then two hours, in the hope of procuring sleep. She did not present herself again for some four weeks, and then every symptom of chorea had disappeared. She was gaining in flesh and in every way was markedly improved. I was informed that after several doses on the first day and night sleep was obtained. Next day she showed the advantage resulting from this refreshing sleep in renewed appetite, almost entire disappearance of the movements; in short, from that time her progress to health was rapid.

In the treatment of a large number of cases of this affection, while I have met with a number which were rather stubborn in yielding, this was the worst, but at the same time the one which yielded most readily to the positive treatment instituted. My usual plan is to ascertain the cause and remove it if possible; then build up, which is generally needed, and employ the cimicifuga in positive doses. The chloral is added only when the movements continue in spite of treatment.

A similar case occurred in my practice many years ago and before I had learned the use of chloral. In this, it being a sequel of rheumatism, the child became so much exhausted from loss of sleep, inability to take food, etc., that he appeared in a dying state. Feeling that this would be the result, I administered morphia in rather large doses till sleep was induced. I confess that I watched him anxiously, and was much relieved after several hours to find him awake and really improved.

Cigarette-smoking in a boy of nine years was undoubtedly the cause in a case which was brought to my clinic, and here the cimicifuga combined with syrup of hypophosphites soon relieved the symptoms. Of course the child was carefully watched to prevent his continuance of his foolish habit.

One instance of recurring chorea was due to intestinal trouble induced by the most ridiculous indulgence of the child at the table. He was permitted to eat to excess of any article he fancied. This, although the danger of it was laid before the parents, was repeated again and again, apparently to show the determination of one care-taker to have her own way. Here some form of pepsin rarely failed to aid the other treatment, but occasionally an attack would prove obstinate. The child showed to a surprising degree, after several attacks with their accompanying an-

* Physician to Howard Hospital, Dept. of Children.

noyances, a good sense in agreeing not to indulge in this way, and no more attacks followed.

A great source of difficulty in curing these cases is the tendency on the part of parents to try each new treatment they hear of; to believe the disease to be wholly the result of worms in the alimentary canal, and by the use of quack nostrums, vermifuges and the like, to delay the progress to health and even to make it worse.

Always demand the most earnest attention to your treatment and suggestions; promise a cure if these are carried out, but do not promise a complete cure in too short a time to allow of the tonic and antispasmodic effects of the remedies being fully obtained. When the movements cease continue the remedies in lessened doses for a time, lest a return of the symptoms produce a loss of confidence.

I do not pretend in this brief paper to enumerate the other remedies which often are found of value. Every physician must act as the symptoms indicate and be guided by the results of the remedies.

COMMUNICATIONS.

A CASE OF ATAXIC PARAPLEGIA.*

THEODORE DILLER,† M.D., Pittsburg, Pa.

The symptoms which this man presents are a mingling of those seen in locomotor ataxia and primary spastic paraplegia (lateral sclerosis). The affection corresponds to neither of these diseases alone, for some symptoms are added and others are absent in the clinical picture of each. But on theoretical or *a priori* grounds one would expect to find, when the parts affected in locomotor ataxia (posterior columns of cord) and primary spastic paraplegia (lateral columns) are both diseased, that there would result a symptom complex which would, so to speak, strike an average between the symptomatology of these two affections. Conversely, such an "average" symptom complex would lead us to look for diseased condition in both lateral and posterior columns of the cord. Reasoning on this ground, one would of course expect the "average" of symptoms to vary according as there existed predominance of disease in lateral or posterior columns. As a matter of fact, pathology shows this *a priori* reasoning to be correct. Very often it is difficult to say just what the pathological condition is which causes the symptom complex under consideration. Some of these cases are nothing more than cases of locomotor ataxia in which the morbid process has overleaped the confines of the posterior columns and invaded the lateral columns. In other cases a transverse or diffuse myelitis is the underlying pathological condition present.

These cases of ataxic paraplegia have been frequently described by Westphal, Ormerod, Strumpel, Gowers, Dana, Grasset and others and are now well recognized, at least clinically. They are, however, somewhat uncommon, and I believe that the notes of this case will not be without interest to the Fellows of the Academy.

William C. applied for treatment at the Pittsburg Free Dispensary last January. He is forty-four years old; married; puddler; denies syphilis; uses a great deal of tobacco.

Several weeks before applying for treatment he suffered some pains (not severe) running across the belly and down the thighs and legs to the toes. There was some numbness and tingling of these parts. He has lost much strength in his legs (it is for this that he seeks relief). Knee-jerks are normal or perhaps slightly exaggerated. Distinct locomotor and static ataxia present Gait is perhaps slightly spastic. Pupils unequal, irregular in outline; respond to both light and accommodation, though very sluggishly. There is marked diminution of strength in legs; no loss of strength in arms. No

* Case reported and patient presented at meeting of Pittsburg Academy of Medicine October 29, 1894.

† Physician to Neurological Department of Pittsburg Free Dispensary; Visiting Physician to St. Francis' Hospital.

atrophy. Cincture sensation and slight numbness of legs present. Sexual and vesical functions unimpaired.

Dr. Wishert discovered partial absorption of lens of left eye (accounting for a quivering of iris which is present).

I lost sight of the man during the summer. He returned to the dispensary a couple of weeks ago, his condition very little changed, except that his knee-jerks are not quite so active. He tells me that he suffered some bladder trouble during the summer necessitating catheterization, for which he was treated for several weeks at the Allegheny General Hospital.

The treatment has consisted in large doses of iodide of potash (℥j t.d.) and general faradization. He states he is some better, but he has not been under observation long enough to note results.

The ataxia, cincture sensation, pains in legs with disordered sensation and bladder trouble are suggestive of locomotor ataxia. The preservation of knee-jerks, the very considerable loss of power in the legs and the slightly spastic gait argue against this diagnosis. The girdle sensation and leg pains are not prominent symptoms, and it must be remembered that the patient himself regards the loss of power in his legs as the dominant symptom.

So as we have here a symptom complex representing an "average" between those of locomotor ataxia and primary spastic paraplegia, we may fairly conclude that both the posterior and lateral columns of the cord are involved and that clinically the case is one of ataxic paraplegia.

Whether the case is really an atypical case of locomotor ataxia or whether the symptoms depend upon some form of transverse or diffuse myelitis it would, I think, be difficult to say. I am inclined to favor the first-named view, principally from the fact that atrophy is absent.

So far as treatment is concerned, the diagnostic distinction between locomotor ataxia and ataxic paraplegia is not of very great moment. Yet it has been said that the last-named affection can be more favorably influenced by faradism and electricity than the first named.

TRANSLATIONS.

PULSATING TUMORS OF THE POPLITEAL SPACE.*

TRANSLATED FOR THE MEDICAL AND SURGICAL REPORTER.†

There recently entered the hospital a patient with a tumor of the left popliteal space which presented visible and distinct pulsations. My first impression from the site and the pulsation was that it was a popliteal aneurism, and I should say that all who saw him with me were of that opinion. But when about to exhibit him to you I began to reflect and found myself in doubt. I returned to the patient and examined him again. I then came to the resolute conclusion that it was no popliteal aneurism at all. I shall now present to you the reasons which led me to this diagnosis.

First of all, what are the essential characteristics of an arterial aneurism? The blood, driven forward by the heart-beat, reaches the aneurismal sac; the wave is the result of the pulsation and its distention. Thus there are at the same time an elevation and an expansion of the tumor. In the second place, when the blood penetrates into the sac through a narrow orifice there is in consequence a murmur which in certain situations, as in the popliteal space, for example, may be doubtful or indistinct. Finally, if the aneurism be arterio-venous, and even in the ordinary variety, there is one well-known and characteristic sign, the thrill. Another characteristic, yet one of less importance, is the condition of the pulse below the aneurism, which is slower or less forcible than that of the opposite side.

A true aneurism is either entirely or in part reducible, either by compression applied directly to the aneurismal sac or above or below the sac on the blood-vessel. Now, it is not to be denied that here in this case there are distinct pulsations, but

*A clinical lecture by Prof. Tillaux at the Charité Hospital, Paris.

†Translated from the *Gazzetta degli Ospedali*, No. 96, 1894, by F. H. Pritchard, M.D.

that does not constitute expansion, which is absolutely lacking, and the greatest force of the pulsations, you will observe, is exactly in the middle of the tumor; so if one place his fingers along the margins the pulsation is not noticed. This last feature is a little difficult of comprehension, but it is the expression of the conclusion that there is in this case no expansion, for then it should be palpable in all directions and at all points. And again, we have not succeeded, even with the most careful examination, in discovering the least trace of a souffle, and this was one of the first signs which led me to doubt the diagnosis. The murmur is not present—I can guarantee it—therefore we have an aneurism in which there is neither expansion nor murmur. The pulse in the posterior tibial artery, tried with the finger, seems less strong than that of the opposite side, but the sphygmograph reveals nothing of importance. Therefore this evident diminution of the pulse-beat in force is the only sign of this tumor being an aneurism. I now press upon the tumor and I also invite you to try it, and I find that it is impossible to obtain the slightest decrease in volume, whatever be the position of the limb. On compressing the femoral artery the tumor no longer pulsates, while its original size persists without its decreasing the least. It has a solid feel, but more resistant than that of an aneurism. Place your finger upon the tumor and you will perceive the pulsation; press upon it and it diminishes in force; press still more and the tumor, compressing the blood-vessel, causes the pulsation to disappear. But, you may interpose, an aneurism may be more or less filled with coagula, and from this the tumor is not to be reduced in size and the murmur absent. But the patient has only suffered from pains for six months and for two months has noticed the development of a tumor. The principal sign upon which I base my diagnosis is this: I declare that this is neither an aneurism of the popliteal artery, a tumor attached to the artery, nor an aneurismal sac filled with coagula, and that because if you place your finger upon the growth you will find it absolutely limited and displaceable toward the joint vertically, and that not only when the leg is flexed but also when it is completely extended. The artery remains tense like a cord, and even then the tumor is movable not only vertically but also transversely. It slides upon the artery and is very movable, so that a movement of one or two centimeters may be imparted to it. I do not hesitate to state that we have here a tumor in contact with the artery, but not attached to it.

What is this tumor? Is it a cyst? Several objections might be offered to this hypothesis. Firstly, the tumor is in the middle line, which does not hold true of cysts originating in the tendons and their sheaths. Median cysts communicate with the joint, in which case they would lift the artery instead of, as here, being lifted. I had thought that possibly it might have been a tumor of the sciatic nerve on account of the patient having experienced pain long before he noticed a growth. This was not merely a sense of fatigue nor formication, but an actual pain in the lower portion of the leg on its external aspect as well as in the dorsum of the foot along the musculo-cutaneous branches of the popliteal portion of the sciatic nerve. At the same time you will notice that the calf of his leg on the affected side is about one centimeter larger than that of the sound side. Still, there are numerous objections to accepting this view. The growth is in the midline and outside of the course of this branch of the sciatic nerve, and though Virchow has called attention to tumors implanted laterally upon nerves and even I have allowed myself to be led on by this idea, I dropped it, as the tumor is still movable even when the limb is in extension, when the nervo-vascular fascia of the popliteal space is tense. It is beyond a doubt that it is connected with the popliteal branch of this important nerve, yet only by contiguity, for how could we otherwise explain the painfulness?

Possibly it is an enlarged lymphatic gland. I do not believe it, but I cannot affirm it, for this lymphatic must be in the depths of the space. Of what character is it, then? But such a view is untenable, for patient is vigorous and robust.

I hold that it is a fibrome, and considering its rapid course it may be a fibro-sarcoma; this the histological examination will settle. Still, in the mean time I can state that it is a hard, solid, mobile tumor of neither vascular nor nervous origin, but probably lymphatic.

What is to be done with it? If it were an aneurism I should not try operative measures before having employed others more simple, as compression. But the patient suffers, he is unable to follow his trade, and the growth is in a dangerous location. With care not to injure the external saphenous vein I incise the skin, the cellular tissue and aponeurosis after having applied Esmarch's bandage. I remove the tumor from its surroundings with Museux's forceps and a small spatula.

We have now operated on our patient in the following manner: Having applied Esmarch's bandage, I examined again and felt that the tumor had not changed in volume or consistence, which was another point in favor of its not being an aneurism containing liquid. After having made an incision I found the superficial veins very much overfilled and distended with blood, they being compressed by the elastic fascia. The popliteal branch of the sciatic nerve was seen to cross the tumor; this was liberated and drawn to one side. The growth then came into view and still was found movable. At first it appeared possible to enucleate it, but I at once saw that it was connected with the artery both above and below, so that I decided to extirpate it by Purnamm's method, *i.e.*, after ligation above and below the tumor. No other ligature was necessary. In the depth of the incision you see the popliteal vein distended and greatly swollen. The growth, which is of the size of a pigeon's egg, I now cut through lengthwise, as it is oblong and you will notice that it consists of concentric layers of coagula, to use Broca's expression; no trace, on the contrary, of active clots and all dense, white and fibrinous, while the sac itself is not completely full. We have therefore here a case of spontaneous cure of an aneurism.

I now wish to study with you this case which is so full of interest. I absolutely affirmed at first that it was not an aneurism, though I myself at first sight thought we had an aneurism to deal with, from the totality of the symptoms. Then I told you that it was a tumor in the vicinity of the vessel, but which had not developed at its expense. I therefore have been mistaken. What is the cause of this error? In the first part of my lecture I stated that it was not an aneurism containing liquid, for there is none of the characteristic symptoms, expansion, souffle nor reducibility, and indeed this tumor presented none of these symptoms. But then I remarked, is it possibly not an aneurism full of coagula? I also denied that. If you consult Broca's work you will read the following:

"On sait qu' à l'état de simplicité, l'aneurysme est une tumeur molle, pulsatile, complètement reducible, donnant lieu à une bruit de souffle plus ou moins fort. Ces caractères peuvent être attenués, masqués ou même effacés par la presence de caillots fibrineux. La tumeur peut devenir plus ou moins dure et acquirir même une fermeté comparable à celle d'une tumeur fibrineuse. On ne sent qu'un soulevement obscur, et si la tumeur est placé sur le trajet d'une artère profonde, comme la poplitée, le chirurgien est quelquefois fort embarassé."

These exceptions of Broca exactly correspond to those of our case, with the difference that, only being able to formulate a diagnosis from the symptoms, I did not hesitate to eliminate aneurism, for the artery being distended by extension of the articulation I was able to move the tumor about in the depths of the popliteal space. And this symptom being present I could not do otherwise than diagnose a solid tumor independent of the artery, though possibly it might be attached to it.

It is a mistake which is often made. But how could this mobility mislead us? The tumor was not as closely in the median line as I first had thought. The artery had undergone slight lateral displacement, so that the growth had been carried somewhat outward from elongation of the vessel, so that on extension of the leg it did not become fixed. Well, suppose that we had made a correct diagnosis: should we have treated it otherwise? Evidently not. Any other method would have had as its object the formation of coagula in the aneurismal sac, and this object may be said to have been already attained. We have therefore done well to operate. The patient will do well and in a month he will be able to leave the hospital completely cured.

LANDLADY—That snow-storm you have painted is wonderfully realistic! Daubleigh—It must be. A tramp got into my studio one day, caught sight of the picture, and unconsciously put on my fur overcoat before he went out.—*Tit-Bits.*

THERAPEUTIC SUGGESTIONS FROM FOREIGN JOURNALS.*

SALT-WATER BATHS IN OSTEOMALACIA.

Dr. Z. Pelczar (*La Semaine Médicale*, No. 61, 1894) has obtained excellent results, with baths, in a solution of common salt and water, in eleven cases of women in an advanced stage of osteomalacia. They ranged in age from twenty-five to forty-six years, multiparæ, in whom the affection had begun after a confinement and dated from two to eight years. The beginning, the chronic course, the pains and the deformations of the bones as well as the cutaneous hyperesthesia, exaggeration of the reflexes, the paretic state of the lower extremities, etc., without any cerebral or spinal symptoms, all permitted him to diagnose the disease with a certainty. In all the cases treatment consisted simply of salt-water baths containing from six to sixteen kilograms of common salt, according to the strength of the patient. They were at a temperature of 34° to 37° C., lasted from fifteen to thirty minutes and were repeated every day or at longer intervals, according to the tolerance of the patient. Besides this lime-water was administered in milk. After several baths they experienced relief; twenty baths sufficed to free them from their pains and to render their movements easier. At the end of four to eight weeks a notable amelioration was to be seen, and in several cases the osseous deformations had partly disappeared. He does not attempt to decide if the cure be lasting.

BROMOFORM IN MENTAL DISEASES.

Dr. Ponticaccia (*Wiener Medizinische Presse*, No. 41, 1894) recommends bromoform very highly in acute maniacal states. He begins the remedy with fifteen drops a day, which are divided into hourly doses, and increases it every day by five drops until from twenty to fifty drops are given a day. Employed in this manner it causes no disagreeable after-effects and in general does not influence the health beyond a slight diarrhœa which is easily controlled by opium. Its sedative action is always prompt and decisive, so that it need not be administered for more than fourteen consecutive days. He relates eight cases, accompanied by violet maniacal attacks, where the remedy gave him prompt results. The first one may be presented in full as an illustration of its action. A merchant of forty-one years and a habitual drinker was seized with a violent attack of delirium tremens, with great restlessness which persisted for twenty-four hours in spite of large doses of chloral hydrate. Therefore in the evening twenty-five drops of bromoform were prescribed, and in half an hour the patient was in a deep sleep with quiet and regular respiration, full and heavy pulse, normal heart's action and perspiring slightly. The following morning he awakened quietly with complete consciousness and only complained of slight headache and a feeling of heaviness in his head. In the course of the day he became still quieter. This improvement continued so that the following day there was no sign of restlessness nor at his discharge from the institution, six days later. From his experience the author concludes that the remedy in progressively increasing doses, twenty to fifty drops a day, in patients with delirium in combination with intense maniacal excitement, exerts a marked sedative action; that it does not act the same in all mental diseases, but it influences the symptoms, excitement and delirium. On the contrary, its action varies more according to the duration of the disease than its intensity, for it has a very favorable action in acute conditions and a less decided one in those having lasted for several months.

INTESTINAL ANTISEPSIS.

Prof. H. Huchard (*La Semaine Médicale*, No. 61, 1894) recommends as an intestinal antiseptic the following powder:

Benzo-naphthol	25	o ʒvj
Powdered charcoal	15	o ʒiv
Pancreatine	5	o ʒj¼

Sufficient for fifty powders. Four to six a day.

TERPINE IN CHRONIC BRONCHITIS.

Dr. Delmis (*Gazette des Hôpitaux*, No. 118, 1894) has employed terpine in chronic bronchitis, bronchiectasia and emphysema, as well as in phthisis, with successful results. It is best given in a pill of ten cgms., three to ten a day.

* In charge of the translator, F. H. Pritchard, M.D.

ELECTROLYSIS IN CHRONIC GONORRHŒA IN WOMEN.

Dr. Barthélémy (*Annales de Dermatologie,* Nos. 8, 9, 1894) has obtained good results with electrolysis in the treatment of gonorrhœa in women in cases which were even refractory to repeated curetting, as well as in chronic urethritis. He employs twenty Léclanché cells and applies from fifteen to twenty milliamperes for twenty-five to fifty seconds to the urethra, parurethral crypts and Bartholini's glands. In the uterus he allows forty to fifty milliamperes to act for three to four minutes. The positive pole is used as a cauterizant, while the negative is applied to the abdomen. In the uterus an ordinary uterine sound may be used, in the crypts a thin platinum wire. A sitting should be given every sixth day and the treatment be continued up to two months. He has never noticed any disagreeable results.

COCAINE TO SUPPRESS THE SECRETION OF MILK.

Dr. Iore (*Lo Sperimentale,* No. 30, 1894) having observed with other gynecologists that when cocaine is employed in painful fissures of the nipple it had the inconvenience of diminishing the lacteal secretion, concluded to employ it in those cases in which it was necessary to suppress this secretion completely. He uses a five per cent. solution in the following formula:

Muriate cocaine.....	5 | o	5j¼
Distilled water.....	āā 50 | o	5jss gtts xxx
Glycerine.....		

This solution is applied by means of a camel's-hair brush five or six times a day to the two nipples. The milk will be suppressed in two to six days. No inconvenience followed from its use on account of the small amount of surface to which it was applied. The cocaine prevents erection of the nipple, which according to Iore favors and maintains the lacteal secretion. [I have observed that the administration of the fluid extract of coca to nursing women will decrease the milk secretion. The quantity rises again to normal on discontinuing the drug.—*Trans.*]

TREATMENT OF ACUTE YELLOW ATROPHY OF THE LIVER.

Dr. X. Arsosan (*Norsk Magazin for Lægevidenskaben,* No. 10, 1894) communicates a case of acute yellow atrophy of the liver which he treated with success. Since the anatomico-pathological term acute yellow atrophy has been changed by bacteriologists to grave infectious icterus, the modes of its treatment have also altered, and the antiseptic method is regarded by Chauffard as the most promising. The writer proceeded as follows:

1. Absolute milk diet in order to spare the kidneys and facilitate elimination of the toxines.

2. Administration of the following intestinal antiseptic:

Sulphate quinine.....	āā o | 15	grs. ijss
Beta-naphthol.....		
Powdered charcoal...		

To be put up in capsules. Two capsules four times a day.

3. Hypodermic injections of carbolic acid, one-half a syringeful of a 2 per cent. solution daily.

4. Symptomatic employment of tonics, as alcohol, quinine, etc.

The injections of carbolic acid are especially indicated in violent delirium and high temperature, yet they should not be given during coma and prostration, low temperatures nor when there is a pronounced inclination to subcutaneous hemorrhages.

THYMOL AS AN ANTHELMINTIC.

In the *Hospitals-Tidende,* No. 41, 1894, thymol is spoken highly of in the treatment of intestinal parasites and in doses of one-half to two grams (grs. vijss–xxx). While the male fern will be generally preferred in tapeworms, thymol is the best remedy in pinworms when given in a rectal injection.

ICE IN TACHYCARDIA.

Dr. E. Isnel (*Revue Internationale de Medecin,* No. 18, 1894) claims that local application of an ice-bag to the precordium in tachycardia will increase the force of the heart-beat by acting directly upon the myocardium, augment the blood pressure, diminish the number of pulsations and cause irregularities in the heart's rhythm to disappear. Finally, it favors pulmonary circulation and respiration. [A recent English observer has reported an attack of tachycardia aborted by belladonna internally and galvanization of the pneumogastric nerve. A mustard plaster to the epigastrium with belladonna in-

ternally I have found serviceable in one case.—*Trans.*]

DENTAL NEURALGIA OF PREGNANT WOMEN.

Dr. Graetzer (*La Semaine Medicale*, No. 57, 1894) praises, in the dental neuralgic toothache of pregnancy, the following formula:

Acetanilid.....	o | 25	grs. iv
Phenacetine.....	o | 50	grs. viij

Sufficient for one powder. Make six such. One powder three times a day.

THE GALVANIC BRUSH IN SCIATICA.

Dr. Witkowski (*Muenchener Medicinische Wochenschrift*, No. 41, 1894) has obtained very good results with the galvanic brush in sciatica, which instrument he believes to be far superior to the ordinarily employed faradic brush in intensity of action, exactness of dosage and therapeutic efficacy. The patient is placed upon the abdomen and the skin over the sciatic nerve, in its whole extent from its point of exit to the terminal ramifications, is rubbed with the cathode, to which the slightly moistened brush is attached, for about five minutes, with a current of quite high intensity. The electrode is permitted to rest at times upon the painful points. These applications are repeated daily or every two days. The results, he claims, are actually brilliant even in inveterate cases which have resisted other methods of treatment. In some few cases it was necessary also to employ massage and stretching of the nerve. This latter is done by placing the patient upon the back and flexing the thigh forcibly upon the pelvis. The procedure is at first painful, but a notable amelioration is seen after a few trials. Also in tabes dorsalis the galvanic brush has yielded him excellent symptomatic results.

THE DANGERS OF THE IODIDES IN PHTHISIS.

Dr. V. Vitvitzky (*La Semaine Médicale*, No. 57, 1894), of Charkoff, Russia, has observed a case which goes to demonstrate the possible dangers of the iodides in the treatment of pulmonary tuberculosis. A woman of twenty years suffered from a cough with tickling in the larynx and painfulness on swallowing and presented suspicious signs in the apices of both lungs. Yet she had had no fever and her general health was excellent. A laryngoscopic examination showed the larynx to be greatly congested and the vocal cords ulcerated. As they were justly thought to be syphilitic, the iodide of ammonium was prescribed in a dose of two grams a day. After eight days of this treatment a manifest aggravation was noticed. The cough increased, her temperature rose, both râles and an intense bronchitic souffle were to be heard in the apices; bacilli were discovered in the sputa, which up to then had been without trace of them, and a complete picture of galloping consumption developed which was soon followed by death. As is known, a certain number of the symptoms of iodism are localized in the lungs and are expressed by cough, muco-serous expectoration and pleuritic pains. An abundant transudation of serum has been found in the lungs of dogs in which subcutaneous injections of a solution of iodine and the iodide of potash had been made. These facts go to prove that in certain cases of pulmonary tuberculosis the iodides will bring about an unfavorable congestion which may be followed by softening of the tubercles. [In doubtful cases it was suggested a few years ago to administer the iodide to develop the hidden foci of pulmonary tuberculosis if they were present.—*Trans.*]

PERMANGANATE OF POTASH IN POISONING BY PHOSPHORUS.

Dr. Kelemen (*La Semaine Médicale*, No. 57, 1894) was called to a woman two hours and a half after she had drunk a cup of water containing the heads of four boxes of matches. She was conscious, pale, with an intense pain in her stomach and a rapid pulse. He administered sulphate of copper as an emetic and followed this by a 1 per cent. solution of permanganate of potash, she ingesting a quart and a half in two hours and a pint in the rest of the day. The next day she was better but complained of severe pains in her stomach and she had vomited three times. From the fourth day the pains and vomiting ceased and in a few weeks she was well.

TEACHER—What is the passive mood of the verb "to work?" Johnny—To loaf. —*Chicago Record.*

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SATURDAY, DECEMBER 8, 1894.

EDITORIAL.

CONSULTATIONS IN FRACTURE CASES.

Perhaps, taken as a whole, there is no class of traumatisms which are apparently so simple and yet are oftener attended with unsatisfactory results than fractures of the extremities.

The average graduate in medicine on his entrance into general practice is apt to be engrossed solely with the nature of the bone lesion, the quality of the fracture—whether simple, compound or multiple, oblique, transverse, etc.—and unless he has had surgical experience or has been specially warned, his efforts will be primarily directed toward securing immediate reposition and immobilization of the fragments. The possibility of anchylosis following, or injuries of the nerves, the blood-trunks or muscles he may entirely overlook. He adjusts the dressings, splints, bandages or apparatus with an injunction that if severe pain is experienced morphine should be freely given. But the tight bandage has gotten in its deadly work and gangrene follows in the way of peripheral sloughs, or perchance the whole limb is doomed. The patient may recover without any marked deformity, but the limb is paralyzed or a joint is hopelessly locked together by anchylosis.

It is not generally known that with a limb, as with the whole body, violent concentrated force may kill it outright while there are no marked traces of mutilation externally visible to the eye.

The experienced surgeon in serious traumatisms will recognize this in an instant and will predict results accordingly. But with one who has not had opportunities to examine many of such cases, the chances are that he will commit the fatal error of immediately splinting; and when the black, cold foot or hand proclaims the death of the part and that mortification has commenced, he is invariably charged with having destroyed the limb.

What shall one do in the average case of fracture in order to avoid error? Clearly his first move should be to secure the aid of a consultant. He should do this to protect his own reputation, as well as

to fulfill his own obligation to his patient.

The sacrifice of a limb through the ignorance or carelessness of the surgical attendant is indeed a very serious matter, which the profession as well as the courts is always ready to condemn and punish. For however harsh it may seem to the unfortunate defendant, it should never be forgotten that when expert knowledge is called for, the testimony submitted should be solely in the interest of truth and justice, regardless of who is the sufferer in consequence.

These reflections have been suggested by the report of an interesting malpractice suit lately held in Ireland and published in the *Medical Times and Hospital Gazette* (November 17, 1894).

Dr. Thomas O'Brian was the defendant in the city of Cork assizes. The plaintiff was a young, able-bodied groom who had been thrown from a horse and sustained a fracture of the clavicle. Soon after dressings had been applied gangrene of the arm set in, and a shoulder-joint amputation had to be performed. Drs. Walsh and Hueston, of that city, on the stand stated that in their opinion the gangrene supervened in consequence of too tight bandaging; while Surgeon Wheeler, of Dublin, after hearing the testimony, testified that he believed that the gangrene was due to an injury of the subclavian vein at the time of accident. Mr. Nyles, of the Richmond Hospital, employed by the plaintiff, said that in the whole history of surgery rupture of the subclavian vein as a result of fracture had never occurred.

The plaintiff sued for £1,000, and it appears that the jury was satisfied that the doctor was blamable, for they brought in a verdict against him for £175 damages.

We do not learn whether Dr. O'Brian had any associate with him in the early attendance on the case.

If a practitioner fears that he will suffer in prestige or begrudges a consultation fee to a competent *confrère*, then if his case goes badly he should be expected to solely bear the consequences; for the profession is under no obligation to shield him from the full rigor of the law.

ABSTRACTS.

ETIOLOGY AND PROPHYLAXIS OF DIPHTHERIA.

Dr. Becker, of Toledo, Ohio, related the following:

Loeffler, from Greifswald in Germany, says that diphtheria is produced by a specific bacillus, whose importance is not doubted any more by anybody. As diphtheria we can consider that affection only which is produced by the Loeffler bacillus, excluding all similar affections which are caused by other microörganisms. In fact, we often find diseases of the upper air passages which give the same picture as genuine diphtheria, but which are caused by an infection of streptococci, staphylococci or pneumococci and which, like the genuine diphtheria, can take a benign or malignant course. The differentiation in diagnosis can only be made by bacteriologic examination, and all the statistics of diphtheria cannot have any value as long as this differentiation is not strictly observed.

The course of an epidemic diphtheria depends on different factors: (1) on the quantity and the virulence of the diphtheritic bacilli; (2) on mixed infections by which the virulence of the bacilli is increased or the organism weakened by the absorption of the products of secretion; (3) on the individual predisposition.

The bacillus of diphtheria is often found in the pharynx or in the nose of healthy individuals, its presence not producing any pathologic symptoms. It produces a disease only in those cases in which it is fixed on the mucous membranes. Lesions of the mucous membrane facilitate this fixation, and atmospheric

changes, moist air, etc., seem to favor the development of the disease. In the majority of the cases diphtheria is directly transmitted by contact, by cough, kisses, by hands which are soiled with the fresh secretion, but often also by food, linen, etc., even a long time after the infection.

The patient must be considered as dangerous to others as long as bacilli can be found upon the mucous membrane. Usually they disappear a short time after the healing of the local process, while in certain cases pathogenic bacilli are found in the pharynx and the nose after weeks. Enveloped in organic substances and with the exclusion of light the bacillus can retain its activity for months outside of the organism. Dirt, moist and dark houses therefore favorably affect the conservation of the bacilli and the spreading of the disease. The most favorable condition for such a spreading is found in accumulations of susceptible individuals, as in schools, etc.

As means of prophylaxis are especially recommended:

1. Cleanliness, dryness, ventilation and light of residences.

2. Hygiene of the mouth and nose; repeated gargarisms with solutions of chlorid of sodium or bicarbonate of soda; cleanliness of teeth, extraction of diseased teeth; removal of hypertrophied tonsils.

3. Cold spongings of the neck.

Every suspicious case should bacteriologically be examined. Every practitioner should receive culture media from drug stores or health offices to be simply inoculated and sent to the bacteriologic station. The report of all cases of genuine diphtheria, likewise of all suspicious cases, should be obligatory, and all the diphtheritic patients should be isolated. To possibly prevent the spreading of pathogenic germs, local anti-parasitic treatment should be resorted to if the locality of the disease allows it.

The most effective preventive against the spreading of diphtheria is the prophylactic inoculation of those persons surrounding the patient, especially of the children. Numerous experiments have proven the harmlessness of Behring's curative serum (Heilserum), and its effect as a preventive remedy should be tested liberally in schools and families. Disinfection of the sick-room and of all things which have been used by the patient should always be done. Convalescents from diphtheria should not come in contact with healthy people before the absence of the bacillus is proven by bacteriologic examination. In epidemics the laity should be enlightened by public instruction and publications.

Representing the French Committee, Professor Roux, from Paris, offered the following thesis:

1. Diphtheria is a contagious disease; the report of the cases must be obligatory.

2. Diphtheritic patients should be isolated.

3. The health officers have to provide for the proper disinfection of rooms infected by diphtheritic patients, of their clothes, linen and beddings; in short, of everything that has been used by the patients, toys included. During the sickness the soiled linen, etc., must be disinfected before given out for washing.

4. Carriages, etc., used for the transportation of diphtheritic patients must be disinfected after each use.

5. Children who have had diphtheria should be kept from school until the physician has stated the cure and permitted the return to school.

6. When a pupil of a certain school is taken sick with diphtheria, the rest of the children should be under the observation of a physician for some time. All suspicious cases of angina should be excluded from school immediately. Special care is required for the sisters and brothers of a patient.

Besides these rules, to be effected by official ordinance, the following principles should be generally adopted:

1. In order to employ an effective treatment of diphtheria the diagnosis must be made early. The beginning of the disease is insidious in many cases, and it would be overlooked less often by frequently repeated inspection of the child's pharynx. Mothers should make this inspection daily and the children be made used to it from an early age.

2. An early and sure diagnosis of diphtheria can only be made by bacteriologic examination, which therefore should be practiced by every physician.

3. Our knowledge concerning the effect of the anti-diphtheritic serum is of a kind at present that its prophylactic use can be recommended for children in families with a diphtheritic case.—*The Journal.*

PREVENTION OF DIPHTHERIA FROM THE STANDPOINT OF THE HEALTH OFFICER.*

U. O. B. WINGATE, M.D., M.M.S.S.

In presenting this short paper I do not claim to offer anything original or new, but merely to give the results of my observations and suggest points that may be profitably discussed.

Prevalence.—The widespread and variable prevalence of diphtheria is of great interest to the health officer. Rural statistics avail us nothing in this country, as a rule, but statistics of death from this disease in our larger cities are fairly reliable. There is one feature, however, that has not yet generally entered into our statistics that may modify them somewhat, that is, the prevalence of croup and what proportion of cases of so-called membranous croup are cases of diphtheria. The recent researches of Dr. H. M. Biggs, of New York, which show that nearly 80 per cent. of cases of so-called membranous croup were found to be cases of true diphtheria by a bacteriologic examination, are of great importance to the health officer and demand a most earnest and careful consideration. I believe all cases of croup presenting exudation in the throat should be treated by the health officer as true diphtheria, unless a bacteriologic examination proves it to be non-diphtheritic. This would seem to be, in our present state of knowledge, the only safe procedure, for certainly if there be a doubt in regard to the care and treatment of infectious diseases the public should have the benefit of it.

The following is a table showing the per cent. of deaths from diphtheria on the estimated population during the years 1892 and 1893, as officially received from a few of our larger cities in this country:

New York	1892	0.08	1893	0.10
Chicago	"	0.07	"	0.06
Philadelphia	"	0.13	"	0.08
Brooklyn	"	0.08	"	0.06
St. Louis	"	0.04	"	0.04
Boston	"	0.09	"	0.10
Baltimore	"	0.08	"	0.04
San Francisco	"	0.07	"	0.05
Cincinnati	"	0.09	"	0.05
Buffalo	"	0.06	"	0.05
Cleveland	"	0.07	"	0.04
Washington	"	0.07	"	0.04
Pittsburg	"	0.11	"	0.06
Milwaukee	"	0.16	"	0.08
New Orleans	"	0.02	"	0.03

It will be observed by this table that in 1892 the largest death-rate from this disease in fifteen of our largest cities was in Milwaukee, Philadelphia and Pittsburg, being 0.16, 0.13 and 0.11 respectively; and the smallest rate for the same year was in New Orleans, St. Louis and Buffalo, being 0.02, 0.04 and 0.06 respectively. While in 1893 the largest rate was in New York, Boston and Milwaukee, being 0.10, 0.10 and 0.08 respectively; and the smallest rate was in New Orleans, Washington, Cleveland, Baltimore and St. Louis, being 0.03, 0.04, 0.04, 0.04 and 0.04 respectively. These figures are approximately correct.

Etiology.—That the Klebs-Loeffler bacillus and its products cause all the pathologic phenomena connected with diphtheria there seems to be no reasonable doubt at the present time, but the origin of this bacillus and its habits are matters far from being settled, and these questions bear a very important relation to the etiology of this disease. Whether the bacillus originates *de novo*, or whether it is a product of evolution from other forms of life, whether it can live in the soil in its true state or is capable of taking on a form of existence non-pathogenic or saprophytic for an indefinite period of time, and then under certain favorable circumstances is capable of developing into pathogenic qualities, are questions yet to be solved. Quite an extensive experience with this disease, both as a practicing physician and as a health officer in a city which at times has led all other cities in this country in the large number of cases of diphtheria, leads me to observe that it is favored by cold, damp, cloudy weather; that it is more active in winter than in summer; that it is favored by damp, dark cellars and poorly drained soil; that in certain conditions of soil and weather it seems to remain dormant for an indefinite period of time, and under more favorable conditions, such as cold, cloudy, damp but not too wet weather, it becomes active; that sunlight, good air, good drainage and plenty of snow in its season very materially lessen its ravages. There is much, however, to be learned concerning the true nature and habits of this bacillus, and

*Read in the Section on State Medicine, at the Forty-fifth Annual Meeting of the American Medical Association, held at San Francisco, June 5–8, 1894.

this is a difficult matter to study, for nature's laboratory, in which these bacilli operate, is far different from any constructed by man.

That defective plumbing may be an indirect cause there seems to be no reason to doubt, but I have found no evidence that the bacillus is carried in the escaping sewer air; it is more probable that the effect of inhaling the sewer air debilitates the system and renders the powers of resistance less, thereby favoring the infection of diphtheria as well as any and all other infectious diseases.

Periodicity.—Hirsch has called attention to the possible cyclical character of the epidemicity of this disease, though the cycles have extended over periods of various lengths, many of them only a few years, others lasting several decades. In the city where I reside, the two periods of greatest prevalence of the disease that have existed since records have been kept were about ten years apart, these periods lasting about two years each; at other times, although the disease has been constantly present the number of cases has been comparatively low.

Modes of Dissemination.—The means of disseminating this disease are many; from person to person by means of infected clothing of all kinds, furniture, rooms, books, papers, foods, drinks (especially milk), milk tickets, money, domestic animals, such as dogs, cats, birds, etc., and at school from everything with which the child may come in contact, as almost everything conceivable may, under certain circumstances, become infected. There is no evidence that the disease can be disseminated by the air for more than a very few feet; it is usually necessary to come in actual contact with the bacillus at its lodging-place in order to become infected, and unless it is propelled for some little distance by the patient in coughing, it is rarely taken through the medium of the atmosphere.

Stage of Incubation.—The stage of incubation is usually short, not longer than two or three days; it may vary, however, being modified by the virulence or activity of the bacilli and the powers of resistance offered by the patient.

Prevention and Control of Epidemics.—In ordinary communities the health officer must first have great legal powers, and they must be executed if he is going to contend with this disease; he must also have the hearty coöperation of all physicians in the vicinity. Without these two requisites he is absolutely powerless. The education of the people in the importance of sanitary matters is an admirable requisition, but it will not be sufficient alone, in our day and time, to cope with epidemics of diseases of any kind. The importance of law and the coöperation of physicians cannot be too highly appreciated by members of our own profession. Our medical schools need to impress this more emphatically on the minds of medical students.

Cases must be isolated early and long, and to do this in most families where the disease prevails, the cases must be reported to the health officers early. Every city and town should provide means for a bacteriological examination in any and all cases where there can be a question of doubt about the diagnosis, and this is often the case.

Every city and town should also be provided with an isolation hospital, or an isolation ward in a hospital, to which every case can be removed, if possible, and isolated from all other cases and placed under the charge of nurses trained in the care of infectious diseases. By these means a better chance of recovery is gained by the patient and the danger of spreading the disease is reduced to a minimum. These facts should be taught the people by the physicians in such earnestness that they cannot fail to learn the lesson. These hospitals should not be pest-houses nor disgraced by that name. Under modern scientific medical knowledge we have no longer any use for a pest-house, and one should not be tolerated in any civilized community. With the antiseptic and aseptic care of all patients with diphtheria, as carried out by modern trained nurses under the direction of competent physicians, in properly constructed isolated hospitals, the control of the infection is absolute. A case of diphtheria early diagnosed and removed to an isolation hospital, and kept there until fully recovered or until he dies and the body properly disposed of, and the house and infected articles in the house early and properly disinfected or destroyed by fire if of little or no value, will prevent a spread of diphtheria as effectually and surely as a problem can be solved in mathematics; but the details in each case must be correctly observed to ar-

rive at a successful result. Where a large number of cases exist in a community the same principles hold good, but it becomes a more complicated problem.

Isolation and disinfection are the keynotes of the prevention and spread of diphtheria, but the details of these two important measures must be as fully understood, and their importance as fully realized, in order to be successful, as the principles of asepsis in surgery.

Having isolated the patient and thoroughly disinfected all apartments and articles infected, and having cared for the case in the most approved manner known to modern trained nursing, there is one matter often lost sight of, that is, keeping the patient isolated long enough. It is well known that the bacilli of this disease may exist in the posterior naris and pharynx for a long time after all traces of exudation have disappeared, and it is decidedly unsafe to discharge patients from isolation until the mucous membrane is entirely healthy and has been thoroughly disinfected for several days after all appearance of a diseased condition has subsided.

No case, however light, should be discharged from isolation for at least four weeks from the time of the commencement of the disease, and no child should be allowed to attend school or mingle with other children until the expiration of six weeks from the commencement of the last case in a house, in case of recovery, and in many instances a much longer period of time should be observed. In case of death, the body should be wrapped in a sheet wet in a proper disinfectant and immediately hermetically sealed, and should be prohibited from transportation, but should be buried or cremated within twelve hours after death, after which all apartments and articles infected should be thoroughly disinfected, and those of the family exposed should not be relieved from quarantine for at least seven days after the disposal of the body and disinfection. This rule should also apply to all persons exposed to a case of diphtheria before thorough isolation and disinfection, whether isolated at home or removed to a hospital.

By such measures only can we expect to control the ravages of this disease, and it will require a realizing sense of the importance of such measures on the part of the health officer, as well as courage and efficient police powers and police force, at times, to carry out such provisions successfully.—*The Journal.*

OVER-FED INFANTS; CAUSE, EFFECT, TREATMENT.

Work (*Jour. A. M. A.*) says: We can say properly that an infant is over-fed when it fails to digest and assimilate the food furnished it. The natural food of the new-born babe, all things being equal, is the food sent with it—the mother's milk—which for the first two or three days after birth seems to the inexperienced or unthinking mother or nurse very inadequate to the support of the child, but it is all that the little new creature can possibly, with certainty, digest and assimilate. Too often the mischief is played with the child during the initiatory period of its digestion. It is often difficult for the attendants in the nursery to realize or understand the untried weak condition of the whole digestive and correlative systems of the infant. In fact, we must consider that the whole new being with all its varied systems, both anatomic and physiologic, is in a primary rudimentary condition. Thus we observe the simplest form of food which is naturally furnished it. Recognizing the foregoing fact, we should act intelligently if we are called upon to advise in artificial feeding, and select that food for the unfortunate infant which most nearly simulates the mother's milk. Unless disease is present with the mother, which is transmissible by her milk to the child, we should use our utmost endeavor to have it nurse the mother; as we have the best interests of both mother and child in view.

Some young mothers do not possess the best facilities for furnishing this natural food to their offspring, but there are very few who cannot be corrected in this respect by patient persistence. If the nipple is not drawn to dimensions sufficient to allow the babe to nurse well during the first two or three days after parturition, we may have to resort, unfortunately, to artificial feeding; for after lactation proper ensues there is usually such a tur-

gescence of the mamma that satisfactory modification of the nipple then is impossible, and after the usual application of pumps, plasters and various ointments to remove this gorged condition, the babe is virtually weaned; and if the child is so fortunate as to get its natural food, unless regular habits of feeding during the initiatory stage are observed, it is in danger, when lactation proper ensues, of overfeeding or being over-fed. There is a great temptation often on the part of the mother, which is largely selfish, to make a breast pump of her child, and thus its stomach is impaired. If normal regular habits as to nursing are well established, on the part of the child, commencing immediately after birth, which habit we know can be attained within seventy-two hours by allowing the child its own undisturbed time to rest or sleep, after first attending to all its needs as to proper cleansing, clothing and food, if it demands it, before tucking it in its little bed in a warm, properly ventilated nursery, allowing it to awake by force of hunger or some other cause peculiar to itself—some dictate of nature. When it awakes give it such care as will make it comfortable for another period of rest of from two to six hours, then put it to the breast again to its satisfaction. It may nurse itself asleep; then tuck it away again, and so on, and we can truly say it is a natural child, following natural habits of life. And, too, the mother by this habit of the child will find that the supply of food will adjust itself to the needs of the child, and by a little common sense on the part of all concerned in the care of the little one, there will be no danger of overfeeding and bringing on the invariable result, viz., indigestion, bad assimilation and perchance cholera infantum.

The result of over-feeding is the leading factor in the very great mortality in infancy and childhood. It is true that quality of food plays an important part in the ailments of children. Even in considering the zymotic diseases of children, by which diseases so often fond hopes are blighted, we must admit that the mortality is largely due to over-feeding prior to the inception of the disease. The disease is severe or not according to the fermented condition of contents of the alimentary tract. The decomposed contents of the *primæ viæ* is a fertile field for the rapid propagation of bacilli or disease germs. Thus the severe form of the disease.

The incontrovertible law of cause and effect holds good in the consideration of our subject as well as in all things else with which we have to do. Not long since I was called to the bedside of a child twenty months old, who was feverish, emaciated and debilitated, even to inability to close its eyes; could scarcely utter a cry, had frequent curdy stools and vomited sour curd occasionally. Disease had been denominated cholera infantum. On inquiry of the mother I learned that the child had been sick at intervals for twelve months, and suffered similarly as at this time. Had employed four physicians during this period; child was weaned from its mother, and I learned that she was instructed to give it all the cow's milk it wanted and whenever it wanted it. The case required but little study to determine a diagnosis; cause, over-feeding; effect, the condition of child as above delineated. Before consenting to treat the case, I had the mother promise to follow my directions strictly. We all know how often a mother's sympathy or affections run away with her judgment and thus our directions are not followed, and the result is not satisfactory to either friends of patient or doctor. I ordered three teaspoonfuls of good fresh cow's milk (cow was in the barn near by) every three hours, preceded by a weak solution of bicarb. potassium and followed by two or three grains of catalysin and carbon. This treatment was to continue for twelve hours, and if vomiting ceased and stools less frequent, or change for the better, they were to give four teaspoonfuls at a time, and so on, as the child improved in its digestion and assimilation. We increased the amount of milk until twelve or fifteen drachms were given at a time, which was enough to cause the child to improve so that in four days I pronounced it well, and only had to advise temperate feeding.

Over-feeding the infant and the result following *directly* renders the system less resistant to the diseases of childhood and, in fact, may be a menace to its well-being throughout even a long life. On the other hand, if wisdom is used in following the dictates of nature (as God intended we should) in the feeding of infants, the foundation is laid, physically, for a long and useful life.

THE LIBRARY TABLE.

BOOK REVIEWS.

SYPHILIS IN THE INNOCENT (SYPHILIS INSONTIUM). Clinically and Historically Considered, with a Plan for the Legal Control of the Disease. By Duncan Bulkley, A.M., M.D., Professor of Dermatology New York Post-Graduate Medical College; Physician to the New York Skin and Cancer Hospital, etc., etc. 8vo, 398 pages. New York: Bailey & Fairchild, publishers, 29 Park Row.

One critic has said that after reading this book one feels that even if he were an anchorite, living in the midst of the desert, he could not escape the ravages of the syphilis. While this may be true to a certain extent, the work is a very valuable one, showing as it does the modes by which the scourge can be transmitted in the routine of social and industrial duties to those who are leading perfectly pure lives. Fully one-half of the volume is taken up with an analytical bibliography, for which the highest praise must be accorded the author for his painstaking toil and the vast amount of labor necessary for its compilation. Tables are given of all the epidemics of syphilis, and also one including over nine thousand cases of extra-genital infection, besides which there is the record of over one hundred cases observed by the author himself.

Almost every article of common use is shown to be possible of carrying the contagion. Pipes, spoons, cups, bank-notes, even speaking-tubes, are shown to have communicated the plague. The bathing-robe from a public bath-house is responsible in two cases cited. There is hardly anything which is not shown to be a carrier of the poison, though it is curious to note that the water-closet, so often alleged by patients to be the source of infection, has only six cases credited to it, and some of these are so old and so briefly mentioned by those reporting them as to be of little scientific value. One of the curious cases reported is where wash-water transmitted the virus. Saddest of all are those instances where the physician, while engaged in his work of alleviating suffering, has conveyed the disease or himself fallen a victim.

The question of the legal control of syphilis is one to which the author has evidently given much thought. To quote from the work: "The subject of prostitution becomes a secondary consideration. The first question is not one of 'regulating prostitution' or of inspecting, licensing or legalizing the 'social evil' or of protecting those engaged in it. The legal control of syphilis has a much higher aim, namely, the prevention of the unnecessary extension of a disease which produces a vast amount of sickness, misery and death, not only among the guilty, but also among the perfectly innocent." The author urges that syphilis can be checked in its spread and that "the time has come to place it under the control of the proper health officers, and to make it quite as *criminal to transmit syphilis wittingly* as it is to communicate small-pox, scarlatina or diphtheria." This plan, the author thinks, would act advantageously in various directions. The keepers of immoral resorts would see to it that the inmates were free from disease in order that action should not be brought against them. Moreover, they would take pains that the disease was not carried into the houses of ill-repute by the males frequenting them. Herein lies the important point of the author's argument: "Instead of examining the women publicly, those connected with the nefarious business would see that they were already in a healthy condition. They would then *examine the men.*" This, he believes, would deter men from entering a house of prostitution if they knew that they would have to submit to such an examination, and those who were syphilitic would exclude themselves. He also thinks that it would act to a greater or less extent against clandestine prostitution, as it would be recognized that among this class the dangers of infection were greater and the men would fear the legal penalties if they infected others outside. Such a law would, therefore, in the author's belief, diminish the frequency of syphilis and would also be a step in the direction of breaking up licentiousness.

One cannot read this chapter without being struck with the force of the argument—the placing of the disease on the contagious list and the consequent necessity of *examining the men instead of the women.* The author thinks that the plan would be free from the objections always raised by a certain proportion of the community against the legalization of prostitution and the degrading influences of police inspection, though he confesses that much enlightenment and education on the part of the public is imperative before any method can be adopted for the check of the slow but steady increase of syphilis which is taking place.

The essay which is the foundation of the present work was deservedly awarded the Alvarenga Prize of the College of Physicians of Philadelphia, and while the book is of particular interest to the specialist, it is also so to the practitioner of general medicine as opening his eyes to the ravages of the disease among those whom he may have least cause to suspect and in whose lives there exists not the least shadow of wrong-doing. That it is one of the most exhaustive works which has ever been made of any one medical subject is not too much to say of it. E. J. M.

A MANUAL OF MODERN SURGERY, GENERAL AND OPERATIVE. By John Chalmers DaCosta, M.D. Philadelphia: W. B. Saunders, 925 Walnut Street. 1894.

At the present time there is demand for a book on the subject of surgery which shall stand midway between the quiz compend and the large text-book. This want the author has succeeded in filling; for he has produced a book which, though brief, is clear in style and clever in description.

In the chapter on bacteriology the author readily and without comment accepts as truths theories which the experience of the profession has not as yet shown to be absolutely correct. He follows the school of Metschnikoff rather than of Koch, the leader of thought in the bacteriological world.

The chapters on fractures and dislocations are very long in proportion to the size of the book, for the author wisely decides that as these form so important a part of the work of the surgeon they are worthy of considerable discussion.

In the chapter on abdominal surgery full and accurate directions are given by means of which the small intestine can be differentiated from the large bowel, the most important being in the difference between the attachment of the mesentery and the meso-colon.

The directions for anæsthesia and its complications are clear and explicit and surpass those found in the ordinary text-book on surgery.

Ophthalmology, gynæcology, rhinology, otology and laryngology are not treated, because the writer considers that as these are special branches of surgery they should only be treated by the specialist. O.

LOCAL ANÆSTHETICS AND COCAINE ANALGÆSIA: THEIR USES AND LIMITATIONS. By Thomas H. Manley, A.M., M.D. St. Louis: J. H. Chambers & Co. 1894.

This unique and excellent monograph is the result of the author's long experience with local anæsthetics. All his statements are corroborated by cases cited from his own practice. He prefers local anæsthesia in the great majority of surgical cases, because it avoids all the deleterious after-effects of pulmonary anæsthesia. In his operations on the skull he prefers cocaine to ether, because under ether cerebral hyperæmia is produced which causes the brain and its membranes to protrude through the opening in the skull—a complication which is not met with under cocaine.

In hernia operations the mortality is decreased from 50 per cent., the ordinary rate, to 30 per cent. The large mortality in strangulated hernia he explains as follows: "Pain is a cardiac depressant of great potency, and when intensely poignant and long-continued induces deep collapse. Now it is well known that all pulmonary anæsthetics first stimulate and consecutively depress. Hence it may be in many cases of operation for strangulation ending mortally that the accumulative depression following the primary pain and the volatile chemical was too great for the recuperative powers of nature to overcome."

He has used thermal anæsthesia extensively in breaking up fibrous anchyloses.

He gives accurate directions for the use of cocaine hypodermically, preferring the "hub-and-spoke" method, which consists of one insertion of the needle and, after withdrawing it slightly, inserting it through the same opening in different directions under the skin.

As this monograph embodies the results of many cases, the whole profession would do well to read it and learn some of the remarkable results that can be obtained by the use of local anæsthetics and the avoidance of all the disagreeable after-effects of pulmonary anæsthesia.

A SYNOPSIS OF THE PRACTICE OF MEDICINE. By William Blair Stewart, A.M., M.D.

The usual classification of diseases is adopted by the author, who has described in a concise manner everything relating to the practice of medicine.

Under the head of "Prophylaxis of Contagious Diseases" the author has made a serious mistake by recommending as a disinfectant a certain proprietary article of doubtful value. The profession is decidedly opposed to advertising patent preparations in the context of a book relating to medicine.

Appendicitis as such is not mentioned, but instead we have described typhlitis and perityphlitis, "terms which no longer imply pathological entities and are in most instances well relegated to obscurity."

That portion of the book relating to diseases of the blood, especially the anæmias, is carelessly written, for by following the author's description of the relation of the hæmoglobin to the red blood corpuscle, it would be impossible to differentiate between pernicious anæmia and chlorosis.

The chapters devoted to the fevers, infectious diseases and diseases of the respiratory tract are very clear and explicit and indicate a thorough knowledge of the subject.

As a whole the book is of a character to recommend itself to the student and the busy practitióner. J. O.

CLINICAL MEDICINE. By Judson S. Bury, M.D. Lond., F.R.C.P. London: Charles Griffin & Co., Limited. Philadelphia: J. B. Lippincott Company. 1894.

This work, which is designed for the use of students and young practitioners, consists of twelve chapters, as follow:

I. Introductory.
II. Symptoms for the most part subjective in character.
III. Examination of the surface of the body.
IV. Temperature.
V. Examination of the skin and its appendages.
VI. Examination of the respiratory system.
VII. Examination of the circulatory system.
VIII. Examination of the blood.
IX. Examination of the digestive system and the abdominal organs.
X. Examination of the urine.
XI. Examination of the puncture fluids.
XII. Examination of the nervous system.

The chapters devoted to the circulatory and respiratory systems are well written, but those parts relating to the blood and the urine are deplorably neglected. No method is given for the determination of sodium chloride. Boettcher's (bismuth) test, which is so frequently mentioned in the books as a counter-test for glucose, is also omitted. The

volumetric (Liebig's) method for the determination of urea, which can so readily be performed, is not described, but is stated as being inconvenient. The antiquated Gowers' hæmoglobinometer and hæmacytometer are preferred to the modern Thoma-Zeiss hæmacytometer and the Fleischel hæmoglobinometer, which are not even mentioned by name.

The chapter on nervous diseases is accurately written and harmonizes with modern teachings. With very few exceptions the book is exceeding accurate and can be relied on. J. O.

THE ETIOLOGY OF OSSEOUS DEFORMITIES OF THE HEAD, FACE, JAWS AND TEETH. By Eugene S. Talbot, M.D., D.D.S. Third edition. Chicago: The W. T. Keener Company, 96 Washington Street. 1894.

Between the covers of this book there has been gathered together a large amount of data concerning the irregular development of the bony part of the head, which has been worked out from collections of skulls representing the peculiarities not only of races but also of classes.

The subject of the jaw comprises a broad field of observation, proving the distinct association of this part of the human body with the brain and nervous centers and likewise with the character and hereditary tendency of the individual.

Among the criminal classes and those of neurotic tendency there is a much greater proportion of irregularities in development about the head than is found among moral and healthy-minded individuals. Besides establishing these facts as to abnormalities of cranial development, an effort has been made to determine the normal condition of the height of the palatine arch and the distance between the first molars of the upper jaw.

The author has departed from his immediate professional work and entered the new field of anthropology, in which so far he has been eminently successful, judging from the results of his work.

SYLLABUS OF THE OBSTETRICAL LECTURES IN THE MEDICAL DEPARTMENT OF THE UNIVERSITY OF PENNSYLVANIA. By Richard C. Norris, A.M., M.D. Third edition. Philadelphia: W. B. Saunders, 925 Walnut Street. 1894.

The author in the preface to the first edition states his hope that the book may be of service to the medical student.

This hope has apparently been gratified, for we have before us the third edition.

The book is a syllabus of a series of didactic lectures, which are much condensed without in the least impairing their usefulness.

It does not pretend to obviate regular attendance upon the lectures, but seeks to aid the student in the difficulties of taking useful notes.

This edition is brought up to date by the addition of such new material as has appeared in the course during the last two years.

INTERNATIONAL CLINICS: A QUARTERLY OF CLINICAL LECTURES ON MEDICINE, NEUROLOGY, SURGERY, GENITO-URINARY SURGERY, GYNÆCOLOGY, OBSTETRICS, OPHTHALMOLOGY, LARYNGOLOGY, PHARYNGOLOGY, RHINOLOGY, OTOLOGY AND DERMATOLOGY. Edited by Judson Daland, M.D.; J. Mitchell Bruce, M.D., F.R.C.P.; David W. Finlay, M.D., F.R.C.P. Volume iii. Fourth series. 1894. Philadelphia: J. B. Lippincott Company.

This volume is the third of an interesting series. It contains forty-seven articles, which are reproductions of many clinics and comprise almost every disease to which the human flesh is heir. The papers not only represent what clinical professors say about their cases, but also what they do.

Any one who wishes to keep up with modern clinical methods cannot readily afford to be without this quarterly journal.

There are three articles devoted to the interesting subject of diabetes which are written by specialists on that subject.

The clinic of Roswell Park, of Buffalo, on the subject of "Perineal Section Following Suprapubic Cystotomy and Hernia," is very good. A. D. Rockwell's article on "Neurasthenia Versus Lithæmia" is also worthy of consideration.

The clinics of the German authorities are excellent, but the translations are very unsatisfactory.

HOME TREATMENT FOR CATARRHS AND COLDS. By Leonard A. Dessar, M.D. New York: Home Series Publishing Company. 1894.

This little handbook has been written with the idea of providing the laity with knowledge of how to take care of colds and kindred affections. In very simple language the principal affections of the ear, nose and throat are described, together with the remedies which are usually employed by physicians in such cases. What makes the book valuable to the ordinary reader is the entire absence of technical terms and the simple manner of description. O.

A MANUAL OF THE PRACTICE OF MEDICINE. By A. A. Stevens, A.M., M.D. Third edition. Philadelphia: W. B. Saunders, 925 Walnut Street. 1894.

The author has not tried to furnish the profession or the student with a new work on the practice of medicine. He has simply collected from the ponderous text-books the most important facts and arranged them in a readily assimilable manner, using his broad experience as a teacher in the medical schools to guide him in his work. He has thrown out all theories and unnecessary explanations and has gathered together in a manual a useful outline of the practice of medicine.

ESSENTIALS OF DISEASES OF THE SKIN. By Henry W. Stelwagon, M.D., Ph.D. Philadelphia: W. B. Saunders, 925 Walnut Street. 1894.

That this compend, which is indeed carefully written, has reached a third edition is evidence that it has at least found favor among that class of medical students who desire to take a short cut to knowledge. "A

little knowledge is a dangerous thing," and the student who relies on quiz compends or manuals for his medical education gets the "little knowledge" which will make him dangerous as a physician later on in life.

SYLLABUS OF LECTURES ON HUMAN EMBRYOLOGY. By Walter Porter Manton, M.D: Philadelphia: The F. A. Davis Company, publishers. 1894.

The object of this syllabus is to furnish to students and practitioners the main facts of embryology. It follows the teachings of such authorities as Balfour and Foster, and harmonizes with the latest English edition of Gray's "Anatomy." Therefore it is to be considered as being trustworthy.

FIRST AID TO THE INJURED. By E. J. Lawless, M.D. Philadelphia: J. B. Lippincott Company. 1894.

This book has for its object the instruction of those who act in emergencies on the battle-field and in military camps. The chapters devoted to hemorrhage, fractures and wounds are concise and reliable, and for the treatment of these conditions minute descriptions are given, involving the use of such materials as are found in the hands of every soldier.

THE POCKET ANATOMIST. By C. Henri Leonard, A.M., M.D. Eighteenth revised edition. Detroit: The Illustrated Medical Journal Company, publishers.

This pocket anatomist is really Gray boiled down and condensed into the very smallest space possible. It is only intended as a help to the student in his preparation for an examination in anatomy, and as such is well executed.

A MANUAL OF HUMAN PHYSIOLOGY. By Joseph H. Raymond, A.M., M.D. One hundred and two illustrations in the text and four full-page colored plates. Philadelphia: W. B. Saunders. 1894.

This book is clearly printed and neatly bound; covers the subject at length in an interesting style and with sufficiently minute detail for any purpose except the preparation of a medical student for final examination on the subject, and would be a help even then. W.

PRACTICAL MANUAL OF THE DISEASES OF WOMEN AND UTERINE THERAPEUTICS. By H. Macnaughton-Jones, M.D., M.Ch., M.A.D. (Hon. Caus.). Sixth edition. London, England: Balliere, Tindall & Cox, 20 King William Street, Strand.

The book commends itself alike to the gynæcologist as well as the student, for there is much in it of interest to both. This edition, as compared with the other editions, is a comparatively new book, for it has been in greater part rewritten and is completely rearranged and reillustrated. Considerable additions have been made, especially in the pathological and surgical portions, to keep pace with the rapid advancement in those branches of gynæcology. Several new chapters on uterine reflexes, sutures and ligatures, the surgical treatment of uterine fibromata, affections of the Fallopian tubes, tubal pregnancy and ovarian affections have been added. The type is good, the engravings clear and the book compact. Altogether this volume will be "found useful as a safe guide by the practitioner and an assistance in the study of this branch of his profession by the student." W. C. G.

CURRENT LITERATURE REVIEWED.

IN CHARGE OF ELLISON J. MORRIS, M.D., AND SAMUEL M. WILSON, M.D.

THE PHYSICIAN AND SURGEON

for October. Dr. Don. M. Campbell writes of

The Surgical Treatment of Granular Conjunctivitis: A Modified Instrument.

Giving a long list of synonyms, the author states that the disease is very rebellious to treatment and often baffles even a specialist. A long list of remedies highly praised by various men is given and appears to divide itself into (1) astringents, irritants and caustics; (2) antiseptics.

The disease appears due to specific organisms causing the growth of the trachoma, deposits of lymphoid tissue in the inflamed conjunctiva.

The micro-organism growing in these granules makes their crushing necessary before we can destroy the growth.

While rasping, excision, etc., have been successfully used, the best means of treatment seems to be by Knapp's roller forceps, and as the pattern generally made permits a portion of the membrane to escape uncrushed, the author uses a modification, which he pictures, in which the rollers project beyond the jaws of the forceps.

Crushing is not sufficient, however, and after performing the operation nitrate of silver, sulphate of copper or bichloride of mercury should be applied in crystal or in solution, as seems best suited to the case, until cure results.

The cases reported where a single application of any kind results in complete cure generally are proven to have been simply papillary conjunctivitis.

Dr. Delos L. Parker writes of

Singultus.

Four cases are given of hiccoughing which resisted ordinary remedies. In one instance

the patient was suddenly seized when in seemingly good health; another was convalescing from dysentery; a third was dying from tuberculosis; and the particulars of a fourth case are not given. In each case cupping the epigastrium gave immediate relief, and in each case it was necessary to repeat the operation in two hours, but not again. The recurrence in two hours seems inexplicable, but the cupping is supposed to relieve by overcoming the diaphragmatic spasm by equalizing atmospheric pressure above and below.

At a meeting of the Detroit Medical and Literary Society Dr. Hitchcock reported a case of

Rupture of the Intestine.

A man working in a sawmill was violently struck in the right groin and right side of the scrotum by a board. He was seen about three hours afterward and had taken about ¼ grain of morphine to relieve his pain.

There had been vomiting, and pain referred to the end of the penis. No decisive symptoms were found; the pulse was about 88. Soothing applications were ordered.

Seen the next morning, the temperature was 97.6°; the pulse too rapid to count; an emphysematous crackling could be distinguished at the seat of injury under an uninjured skin. Rupture of the intestine was diagnosed and operated for, and the colon found torn, with its contents free in the abdomen.

The patient died shortly after removal from the table, and the case was reported to show how little disturbance might be shown by a person injured in this manner. A couple of other members recalled somewhat similar cases in which there was the same absence of prominent symptoms, or even injury of the skin, and resulting in early death.

Other papers in this issue are "External Perineal Urethrotomy," by Dr. Ernest .T Tappey; "Infantile Eczema, Especially in its Relation to the Infant's Face," by Dr. Andrew P. Riddle.

A Russian physician is recorded as having discovered that small doses of tincture of strophanthus, given about three times daily, produces a distaste for liquor in excessive users of alcohol.

IN THE BRITISH JOURNAL OF DERMATOLOGY

Dr. Wm. Anderson reports two cases of

Eruption Cheloid.

The patches of cheloid here did not extend marginally beyond their original area. Under the microscope, however, they showed the typical structure of spontaneous cheloid —the normal tissue being replaced by white fibrous bands in the dermal layer, the papillæ and rete-cones being unchanged.

In the first case the patient was a healthy-looking boy. On the knees and elbows were patches of psoriasis, on the body a number of spots ranging in size from a pin head to a three-penny piece with dull surface and a surrounding pale areola. Interspersed with these were patches with smooth, milky white skin, slightly elevated and free from hair follicles.

The patient said these appeared in spots previously to the seat of the eruption, and a spot was found in transition.

A spot was excised and found to be interlacing fibrous bands covered by papillæ and rete-cones. The marginal vessels were enlarged and surrounded by areas of unclear proliferation.

Under chrysophanic ointment the psoriasis improved rapidly, the spots improved more slowly, and later some of the cheloid spots seemed to contract and pass away spontaneously without leaving any trace.

Drawing a moistened stick of nitrate of silver around a spot caused a ring of eruption, but this disappeared.

The second case was a woman aged 26 years. The patient was tuberculous. The eruption was on the backs of the hands and disappeared under carbolic-acid ointment.

The other paper in this issue is on "Dermato-Neuroses," by Dr. St. Leloir.

BUFFALO MEDICAL AND SURGICAL JOURNAL

for November. Dr. M. Hartwig comments on the neglect of English journals to discuss the use of "ambulatory splints" in treating fractures of the lower extremities.

This treatment is being adopted in Germany and consists in the application of a splint or plaster bandage to secure apposition of the fragments, and in addition a modification of Taylor's splint for hip-joint disease, thereby supporting the body by upright splints attached to the pelvis.

Dr. Albers, of the Prussian army, combines strips of wood with a plaster bandage, obtaining the same result with a less cumbersome apparatus.

Dr. Henry L. Elsner writes of

Mixed Infection in Pulmonary Tuberculosis.

The conditions described are due to the presence at the same time of tubercle bacilli and some other infecting organism, usually the pneumococcus of Friedlander. Some of these conditions have been known for a long time, without the cause of the peculiar symptoms being recognized.

Besides the miliary form of acute tuberculosis we meet with a variety which seems broncho-pneumonic, is accompanied by hæmoptysis, and has been described as due to inspiration of bacilli, and a third which closely resembles acute pneumonia, and the green sputum frequently found in this, and which may also occur in uncomplicated pneumonia, furnished the title of a paper by Traube.

Cheesy pneumonia is not marked at the outset by the sharp chill which is usually found in simple croupous pneumonia; bron-

chial breathing appears late in the disease, sometimes the end of the second week, and instead of the characteristic subcrepitant rale we find a coarse mucous one.

Giving the theories of some other men, the author concludes that the only way of obtaining a clear diagnosis is by careful and repeated microscopic examinations of the sputa. Micrococci, streptococci and staphylococci are all found in tuberculous cases, and the significant statement is made that the injection of tuberculin renders animals susceptible to germs that had lost the power to injure healthy subjects.

The presence of this diffusible poison therefore predisposes to attacks of inflammation (pneumonia, for example).

The author classifies the cases of mixed infection clinically recognized by him as follows:

1. Cases of acute fibrinous pneumonia in which the disease attacks an area of lung tissue the greater part of which is the seat of infiltrating but latent tuberculosis. The tuberculosis here usually had origin or was coincident with disease in another organ, and usually gave no subjective symptoms until the appearance of the pneumonia.

2. Cases in which acute croupous or catarrhal pneumonia occurs near and causes changes in previously recognized tubercular areas. The pneumonia terminates by crisis or lysis and is not associated with early hæmoptysis. (*b*) Cases where the pneumonia occurs, without early hæmoptysis, in distant areas or in the other lung and the tubercular disease becomes actively progressive.

3. Streptococcus pneumonia, in which pneumonia develops from the aspiration of infecting agents from the seat of original infiltration in a case of latent or active pulmonary tuberculosis. Hæmoptysis is usually present during the stage of acute exacerbation or immediately preceding the pneumonia.

4. Cases of acute broncho-pneumonia, occasionally fibrinous, with concurrent bacillary infection, where as a result of lowered vitality there occurs rapid disorganization of lung tissue, cheesy infiltration, coagulation necrosis and death.

Analyzing his experience somewhat further, the writer gives a minute account of a case in which, about fourteen months after the emptying and healing of a tubercular ischiorectal abscess, a well-nourished man of 36 years developed pneumonia. At the outset the case seemed typical croupous pneumonia, except that it was limited to the right apex and gave absolute flatness when first seen. Microscopic examination of the sputa showed pneumococci but no bacilli. For a week the case was typical of croupous pneumonia, then a profuse perspiration sent the temperature to 99°, then it rose to 101° and tubercle bacilli could be found in the sputa. The case now showed more and more tubercular symptoms and died fifteen weeks from the outset. The author thinks tubercle bacilli can, without assistance from other disease germs, cause a pneumonia which cannot be diagnosed from croupous pneumonia expect by the aid of a microscope.

The same number contains "A Review of the Relations Between the State and the Medical Profession in New York," by Dr. Frank Whitehill Hinkle.

JOURNAL OF CUTANEOUS AND GENITO-URINARY DISEASES

for November. Dr. Wm. Thomas Corlett writes of

Cold as an Etiological Factor in Diseases of the Skin.

A number of cases are described at length, the common features being as follows: A sudden eruption resembling herpes; the vesicles rupturing and leaving a ham-colored weeping surface, which becomes a faded rose color covered by fine scales. The eruption appears at the approach of cold weather, involves the dorsal surface of the hands or feet, disappears spontaneously at the approach of warm weather, and is not, to the author's knowledge, due to any bodily condition. Paroxysms of itching may occur, and there is a distinct tendency to return annually to the surface formerly affected.

Dr. James C. White reports a case of

Pityriasis Rubra Pilaris.

A young lady of 27 years whose skin was previously healthy noticed her palms and soles becoming red and scaly, the scalp full of dandruff, the face red and branny and papules forming. The face was a uniform dull red color and slightly scaly and thickened. The scalp was covered with a thick layer of scales, with apparently little fat. The upper part of the chest and the neck also roughened, red and infiltrated. The palms, the soles and the extensor surfaces of the fingers were greatly thickened, and the lines of flexure marked by deep and painful fissures.

Over all other parts of the body the condition was different. The mouth of almost every follicle was filled by a horny papule, varying from a pin-head to an upholsterer's tack in size. These were slightly redder than the intervening skin. For the most part this resembled no other skin affection, but where the lesions were smallest it was somewhat like keratosis pilaris. The horny papules are the distinctive features of the affection, and except for them the disease might be mistaken for seborrhœa or eczema.

Erytheme Indure des Scrofuleux.

A boy twelve years old, at first thought subject to erythema nodosum. The lesions were larger, more deeply seated, and more generally distributed over the lower limbs than usual, continued to develop for many weeks, and then many broke down, forming deep, indolent, refractory ulcers.

Another case was a girl of eighteen, with a few deeply imbedded nodules on the lateral and posterior surfaces of the legs and a few smaller ones on the arms.

Thorough syphilitic treatment was given, but many of the lesions formed indolent ulcers and the case disappeared from view. Other cases presented similar features.

At the outset these nodules were covered by seemingly normal skin and did not present the brilliant hyperæmia of erythema nodosum; also, instead of occupying the anterior surfaces, they were mainly found on the lateral and posterior parts.

The author does not recognize the right to the title indicating a tubercular origin, as he knows of no satisfactory bacteriological examination.

Lymphangioma Circumscriptum.

A man 34 years old showed the following: The left lateral thorax from the axilla to the last rib and from the nipple to the anterior margin of the scapula was occupied by—

1. Groups of prominent vesicles varying in size from the head of a pin to a small pea, with very thick and firm epidermal coverings. The contents were colorless, or dirty yellowish, and of rather thick consistence. On the borders the vesicles formed small and sparse groups, but in the central portion were densely crowded. By rupture they were converted into oozing areas.

2. Large elevated crusts, thick and of fi m consistence, yellow or reddish in color, formed apparently by coagulation of the contents of the vesicles. Some of them were two or three inches in diameter.

3. Crimson elevations of pea size, resembling angiomatous new growths of cock's-comb character. They were firm, became slightly paler on prolonged pressure, and were sparsely interspersed among the vesicles.

4. Verrucous nodular masses of considerable size and height, some of them capped by dense horny concretions.

The whole upper arm presented on its inner surface similar but more pronounced lesions.

Microscopic examination of a lesion showed lymph vessels connecting with cavities consisting of dilated lymph vessels or spaces of similar formation. The author favors the opinion that these were of new formation and not dilated vessels simply. There was no true elephantiasis.

Multiple Benign Cystic Epithelioma.

This case is reported because the adjective benign seems misplaced, and it leads to the question whether these cases do not all tend toward malignancy.

The patient is a woman of 45 years, the mother of eleven children, only three surviving. No member of her family suffers from any skin eruption.

At the age of twenty-four a few firm pimples appeared scattered over her face, and others kept growing until three years ago. Ten years ago some underwent softening and were removed with caustic preparations, leaving only flat scars. About fifty lesions are to be found over the face, varying from small flat, almost invisible tubercles, larger reddish lesions, one of which is the size of a quarter dollar, to two or three much more prominent, presenting abrupt edges with depressed centers resembling Hutchinson's crateriform epitheliomata and measuring from one-half to three-quarters of an inch in long diameter.

The right upper eyelid is the seat of a rodent ulcer, closing the eye.

Sections from some of the lesions showed, microscopically, masses of epithelial cells, and often showed direct connection between these and the lower rete layers. These cells were often found to surround small cysts containing sometimes a corneous substance, sometimes cells undergoing colloid change.

Dr. John P. Bryson writes of

The Question of Surgical Interference in Tuberculous Kidney.

In the author's experience when a case presents itself there is invariably infection also of the lower urinary passages, and usually of the seminal vesicles and the prostate, before there appears to be excuse for surgical interference.

"When in kidney colic," the author says, "the pain shoots quickly into the testis and causes its marked retraction the cause is situated low down in the ureter; but the cause of the trouble is up toward the kidney or in that organ when, in the absence of this set of symptoms, the pain quickly passes to the opposite side and causes nausea and vomiting."

The author thinks that so many points are to be taken into consideration in every case that no generalized rules can be laid down for operation in these cases.

He is decidedly opposed to interference, when avoidable, for fear of rendering a chronic inflammation acute. To relieve fever and suppuration by incision and drainage or the removal of a stone is an imperative duty, but to attempt to cure a latent disease by operation is useless.

ARMY AND NAVY.

CHANGES IN THE U. S. ARMY FROM NOVEMBER 25, 1894, TO DECEMBER 1, 1894.

The extension of leave of absence on surgeon's certificate of disability granted First Lieutenant Henry R. Stiles, Assistant Surgeon, is further extended two months on account of sickness.

Leave of absence for one month, to take effect on or about December 10, 1894, is granted First Lieutenant Charles Lynch, Assistant Surgeon, with permission to apply for an extension of one month.

NEWS AND MISCELLANY.

Important to Commercial Travelers.

On and after December 1st, Baggage Agents of the B. & O. R. R. Co. will accept coupons from mileage books issued by B. & O. R. R., P. & W. R'y, B. & O. S. W. R'y and Valley R'y of Ohio, in payment for excess baggage charges, at their face value, 2 cents each. This arrangement will not include B. & O. Mileage Books indorsed "good only on B. & O.," B. & O. Southwestern Mileage Advertising Books, nor books older than one year from date of issue.—2t

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ORIGINAL ARTICLES.

PUZZLING POINTS IN LABOR.*

GEORGE R. DEAN, M.D., Spartanburg, S. C.

The environments of a patient in labor, the available help at hand and the outlook for after-treatment are modifying influences which no surgeon or general practitioner can ignore. Many complications in labor which the accoucheur is at any time liable to encounter must be met and treated promptly. Often they occur in regions remote from skilled assistance and where it is almost impossible to obtain needed surgical supplies at the time. Such emergency cases, arising under varying conditions and circumstances, have suggested a title for this paper. I have had much experience in cases where the conditions were such that delay would seriously endanger the life of the mother, and it was not a question of ideal surgery, but what could be done to save the patient.

A few years ago craniotomy was thought to be the sole operation that offered a thoroughfare out of the difficulties that the forceps could not relieve. This, to a certain extent, has been superseded of late years by operations which, under certain conditions, promise more to the child, if somewhat less to the mother. Craniotomy is a cruel operation. It takes the life away from one totally helpless and without a voice in its own destruction. The doctor becomes judge, jury and executioner. Under certain conditions it is still the right and proper thing to do. But with the advancement in surgery, wrought by a keener conception of the principles which underlie and develop its wonderful success, the conditions demanding this terrible operation are diminishing year by year. Recently a distinguished member of this association went so far as to contend that under no conditions should craniotomy be performed upon a living child. While I cannot fully subscribe to this opinion, I believe the conditions necessitating its performance are daily diminishing. The success obtained by Sanger's operation and by Porro's, and lately the good resulting from symphyseotomy, have caused these to be substituted in many cases for this more barbarous procedure. And yet there are cases where craniotomy would offer the best chances of success—all things considered.

The brilliant successes obtained in operations performed for the purpose of saving the child have mostly been upon subjects whose conditions have been previously understood thoroughly, and when every preparation has been made for the anticipated work. Many of the cases thus treated had formerly undergone craniotomy; or at any rate the deformities and other impediments to natural delivery had been well known. Results under such conditions cannot be taken as those which we should expect from cases with which physician is suddenly confronted, of which he has had no previous knowledge and for which he has made no special preparations.

All must admit that to do a "Porro,"

* Read before the Southern Surgical and Gynecological Association, November 14, 1894.

a "Sanger," or even a symphyseotomy, one must assume a great responsibility and take upon himself much labor and anxiety. Only those physicians who live in remote districts and in the smaller towns, where the dread of the knife overshadows all things else with patient and friends, can realize with what temerity an operation is mentioned. It is far different in large cities and in more intelligent communities. There the surgeon would be sustained and commended in his heroic efforts to save both mother and child. The mortality of these procedures under the most favorable circumstances is such that no man should undertake them without thoroughly going over all the ground.

Symphyseotomy is not such an extensive operation as the Cæsarean section, nor is it fraught with so much risk. Still it is a serious one, and may lead to trouble if not done carefully and followed with proper after-treatment.

What, then, are the indications which should guide us in selecting the operation best suited to each individual case? Before attempting to answer this, I wish to refer to conditions incident to location and surroundings. In the Southern States we have a large negro population—a race inured to the poorest and most beggarly environments in their home life. Among these the physician is often confronted by obstacles to delivery which require some one of these operations. As an example of what may be met with in this class at any time and in any community, I cite the following case:

I was called in consultation to a poor colored woman in labor, a primipara upon whom the forceps had been used unsuccessfully for four hours. Her bed was a mass of filthy rags, as was also her clothing; the house small, open and dirty—squalor and filth were visible everywhere. Dusty cobwebs that had not been disturbed for years hung in festoons upon the walls. One small room, 12x14, contained two beds and was occupied by four people. Such were some of the surroundings. Fortunately by turning I succeeded in delivering the child, and thus was spared a more serious operation. But suppose I had not been successful in this: what measures could I have taken in its stead? What would have been her chances for recovery under a Cæsarean section, or even a symphyseotomy? Had I been forced to any other method, I would certainly have chosen craniotomy, believing that with care and patience I could have safely gone through that performance and left my patient in a fair way to recovery; whereas with either one of the others the outlook would have been entirely different.

This is a fair sample of conditions which indicate that craniotomy would offer the safest means for the patient at our command. A decision must be arrived at in such cases after a careful, conscientious and intelligent investigation of everything that concerns the situation. If the impediments to natural delivery in any given case are known to the physician before the end of the term of gestation, thus giving him time and opportunity to make all necessary preparations, the selection of the operation promising the best result is not difficult. Here accurate measurements of the birth channel can be taken and arrangements for nursing and after-treatment can be thoroughly provided; the physician at a moment's notice is ready and prepared to carry out his formulated plans. But in cases where conditions are not known to the physician and he is suddenly confronted by obstacles to delivery which cannot be overcome except by some one of these operations, this decision is not so easily arrived at. The physical condition of the patient, the amount of exhaustion present, the environments, the availability of intelligent assistance and the outlook for proper after-treatment are factors which must have bearings of the greatest moment in reaching an intelligent decision.

The country physician, far removed from educational centers, cannot possibly arrive at the same conclusions in such a case as can his more fortunately situated city brother. With no less fortitude and regard for the life of the child and the well-being of the mother, but with his limited paraphernalia, he could not hope to do a Cæsarean section or a symphyseotomy with any prospect of success, save under the rarest circumstances; whereas the city physician or the specialist, equipped with all that is necessary for such work, familiar with all its details and able to procure the best assistance at a moment's notice, can safely arrive at a very different conclusion. Where, therefore, a craniotomy would be proper in the former case, one of the other operations would be

equally proper in the latter. The conclusion is that in every case that operation must be selected which promises the best results, *all things* considered.

The term Cæsarean section as herein used is to be construed in a general sense, including either a "Sanger" or a "Porro."

When operations of any character are found to be necessary for the delivery of a child, dead or alive, they should be performed as early in the case as possible, sparing the woman's powers and thereby adding to the chances of success. If mother and child are to have the best prospects of being saved, operations must not be postponed until the patient has become exhausted. There can be no excuse, and there certainly is no reason, for permitting a woman to suffer hour after hour without progress, putting forth all of her strength in useless endeavor to overcome the impossible until that exhaustion supervenes from which nothing can save her.

The points I wish to emphasize are: First, the saving of both mother and child where possible is the end to be attained above all other considerations. Second, to accomplish this everything pertaining to the situation or surroundings, and the physical condition of the patient should be carefully considered. Third, wherever the impediments to delivery, from whatever cause, are too great to be overcome by the forceps or by turning, the surroundings and condition of the patient permitting, symphyseotomy offers the best results with the least traumatism to the mother. Where this is impracticable from any cause, the surroundings and condition of the patient permitting, then the "Sanger" or "Porro" operation should be performed. Where neither of these operations is practicable in consequence of conditions or surroundings, then, and only then, should craniotomy be performed.

These are the conclusions at which I have arrived: First, craniotomy should never be performed under any circumstances where it can be avoided with a reasonable hope, *all things considered,* of saving both mother and child by some other operation, even though it be a serious one involving very great risk to both mother and child.

Second, there are cases where craniotomy promises the only reasonable hope of saving the mother.

Only a close observer and a conscientious physician, alive to all the hopes of a joyous motherhood and with an honest desire to do his duty to God and his fellow-man, can be capable of judging as between mother and child when one must be sacrificed for the safety of the other.

I have done craniotomy and may have to encounter its horrors again, but it will be performed by me only as the last resort.

A PRACTICAL STUDY OF SERIOUS ABDOMINAL CONTUSIONS, WITH A CLINICAL REPORT OF TWENTY-ONE CASES.*

THOMAS H. MANLY, M.D., NEW YORK.

[CONTINUED FROM PAGE 787.]

ETIOLOGY.

There exists some divergence of opinion on the causative factors in bruises of the abdomen. Extensive studies have been pursued to elucidate this feature of the subject, yet much remains unsettled.

The most complete and the only methodical series of experiments ever conducted in this country on the lower animal, with a view of elucidating the subject of abdominal contusions, known to me, was published by Dr. B. Farquhar Curtis (*American Journal of Medical Sciences*, October, 1887).

These experiments were further amplified by others on five or six cadavers. Forty-four dogs were experimented on, contusive force alone being employed in all. The abdomens were traumatized by allowing pieces of wood and iron to fall on them, the animals being etherized. In ten no serious harm followed. In only eight was the intestine ruptured. None were immediately killed by the blows.

*Read at the annual meeting of the New York State Medical Association, October 10, 1894.

The author's observations on the cadaver showed that the jejunum and upper part of the ilium were most exposed, and that when one of the hollow organs was ruptured it was caused by being crushed against the spinal column. In 116 collected cases by this author most were injured by kicks and run-overs; but four were buffer injuries. Areas of the intestinal canal were involved in 113 cases; the duodenum, 10; jejunum, 44; ilium, 38; other parts of small intestine, 21; colon, 4. Shock was present in 80 per cent.; severe pain in 104 cases.

Early in the spring of 1879 Professor Giornardi, of Genoa, made an extended series of similar observations and experiments on the lower animals for the purpose of endeavoring the more precisely to determine the causative factors in injuries of the abdomen ("Effets de Coup Violent sur l'Abdomen," *Gaz. des Hôpitaux*, May, 1879). As a result of his remarkable experiments, of which space will not permit a detailed account, he summarizes briefly as follows:

"1st. When such a degree of violence is applied over the abdominal wall as will lead to intestinal rupture, the mucous and muscular layers are the first to give way and the fibro-serous last.

"2d. This being the case, rupture of the inner coats with hemorrhage into the bowel does often occur when the peritoneal investment has preserved the continuity of the lumen, prevented extravasation and favored repair.

"3d. When the bowel has suffered very serious damage, though there may be no immediate rupture, perforation may occur through a gangrenous patch any time from five to ten days or later.

"4th. Mechanical rupture of the intestine, complete or incomplete, either alone or in conjunction with laceration of the solid viscera, follows not from *contre-coup* reflected force, but by direct impact against the vertebral bodies."

Moty divides abdominal contusions into three classes, based largely on their etiological elements (*Revue de Chirurgie*, No. 11, 1890). The author sums up with a warning not to be too premature with a favorable prognosis, in view of possible complications which may subsequently unexpectedly arise.

Prof. Charles McBurney (*New York Medical Journal*, January 26, 1889) reports a highly interesting case of a boy who fell on his abdomen, striking a rail on a railroad. Shock was very marked; he was injured at 3 P.M. McBurney and the consulting staff decided to operate at 11 P.M., intestinal perforation being suspected. Found abdomen full of blood, with laceration of the gastro-duodenal artery. Intestine not injured. The patient recovered.

It would seem remarkable that a fall, or rather stumble, could cause such a rupture of the vascular structure. The majority of abdominal injuries are caused, not by contusion by blows, but by compression, as in run-over cases, the abdomen being crushed violently between two hard resisting bodies, as under wheels between two cars, the so-called "buffer injuries," being caught under falling bodies, etc.

In conjunction with the abdominal injury in this class, we will often meet with associate fracture of bone as a complicating element. In this class, as in contusions, the weight of testimony is that in the vast majority of cases the abdominal contents are lacerated, not by concussion or percussion, but by the intestine or other organ being driven back or downward with great force against the vertebral column or the pelvic ridge.

DIAGNOSIS.

The diagnosis of intra-abdominal traumatisms, as of lesions of a pathological order, is generally attended with very many difficulties. In no case is there any reliable and safe means known by which it is possible either to detect or locate complete rupture of any part of the alimentary canal within the abdomen.

Even if there were a definite symptomatology, in many instances it would avail us nothing, for it is to be remembered that the tendency of an injured intestine is to take on immediate spontaneous adhesive inflammation, and thus effect a cure without interference; spontaneous union here being remarkably and singularly efficient as a salutary process when not disturbed. Besides, in many general shock is very great and impending collapse so threatening that radical measures may and often do deprive our patient of his only hope of recovery.

In the near past it was heralded far and wide that an exploratory abdominal incision under aseptic or antiseptic precautions was harmless. But time has proven that

this was both a dangerous and a fallacious assumption, and that no means known to art will in any manner whatsoever obviate the dangers inherent in an abdominal section made while a patient is under shock.

Stimpson's statistics have demonstrated conclusively that in gunshot penetrating wounds of the abdomen the mortality was largest when active intervention was adopted. Réclus and Berger's observations ("Penetrating Gunshot Wounds of Abdomen," *New York Med. Jour.*, January, 1889) were in the same direction.

Bryant gives the records of 74 severe non-penetrating injuries of the abdomen admitted into Guy's Hospital in eight years. In 44, beyond a passing collapse they rapidly recovered and no bad symptoms followed. Three had peritonitis of an acute type, one terminating mortally. In 17 it was believed that rupture of the viscera took place. The author cited the case of a man among the group who, in a fracas with a woman, was hit violently over the stomach. He immediately collapsed. He quickly rallied and went around for a week, when acute peritonitis followed, from which he ultimately recovered (*British Med.. Jour.*, May 12, 1892).

Morton collected 234 cases of abdominal bruises, in which he found that the digestive tube was injured about once in eleven cases, or in less than 10 per cent. (*N. Y. Medical Record*, July 6, 1889). Jalugeries' tables comprise 345 cases of intestinal rupture. The stomach was ruptured but once. In their order of frequency of rupture the small intestine came first and the various segments of the colon next ("Contusion de l'Abdomen," *Bulletins et Mem. de la Soc. de Chir. de Paris*, April, 1893).

Michaux (*ibid.*) cites three grave cases of abdominal contusion. One refused laparotomy and died; the other two submitted. Internal perforation was found in both. Recovery followed in each.

This author dwells at length on the difficulties in diagnosis. He would advise delay in all cases of shock.

When in doubt he would not operate. Exploratory incision for diagnosis he disfavors, but where reaction sets in and septic peritonitis is formed he would promptly laparotomize. Tillaux, in a valuable contribution on these injuries, observes that at the time of accident exact diagnosis is extremely difficult, on account of shock which may be dependent on causes quite independent of the abdomen and various pathological conditions within it.

"The aspect of the abdominal walls," he truly says, "furnishes us with no definite knowledge of the pathological condition within the cavity." A man was brought into his service who had been injured over the abdomen. There were no surface indications of traumatism. He died in shock. On autopsy it was found that the greater part of the mesentery was torn off and a vast hemorrhage had accumulated. After shock passes away he says that "the facial expression independent of the temperature is quite pathognomonic of peritonitis" (*Gaz. des Hôpitaux*, October 7, 1886). From the preceding observations it is obvious that symptomatology is anything but clear in these lesions. It is important, however, that when it is possible a definite diagnosis should be made, and as soon after injury as is practicable.

PATHOLOGICAL ANATOMY.

The immediate sequelæ of an abdominal injury which threaten life are—

1st. Hemorrhage.

2d. Intestinal rupture.

3d. Peritonitis.

Hemorrhage within the peritoneum in some respects is not unlike that into any other serous cavity. Bleeding within the skull, the pericardium or the pleura imperils life, not by its loss so much as its mechanical effects, irritation, etc.

But within the peritoneal cavity, as its walls are distensible and its contents movable, this does not obtain. The loss of blood in this cavity may be quickly fatal through its volume alone. Intra-peritoneal hemorrhage is no doubt more common in abdominal traumatism than is generally supposed. In moderate quantities no serious harm follows. But when a solid organ is cut or a large vessel opened, the escape may be large and the consequence serious.

In most cases, when the loss of blood is great we may determine its presence by physical signs as well as through the general symptoms. Its most striking clinical characteristic is the great prostration of the vital powers.

In shock from intestinal rupture great pain is superadded. In hemorrhage, too, thirst is urgent and nausea is wanting. The amount of hemorrhage will depend on the structure opened.

Mr. J. T. Taylor (*Lancet*, May 7, 1883) gives the history of a boy who sustained a blow on the abdomen, dying in syncope almost immediately after. On autopsy the aorta was found ruptured just above the bifurcation into the common iliacs. But the vascular structures may suffer serious damage in these cases without the lose of blood, as is proven by Malgaigne's case of a man who had sustained a violent blow over the hypogastrium.

As this man recovered from shock and began to regain his strength, symmetrical gangrene commenced in his lower extremities and he soon died. Post mortem: the abdominal aorta was found occluded by a massive clot and both of its inner coats ruptured (*Bull. de l'Academie de Med.*, June, 1863).

Hemorrhage into the peritoneal cavity will gravitate, but that of a renal origin will lodge in the retro-peritoneal tissue of the flank and hypogastrium, though in some the leak is into the pelvis and out through the urine. There is no distinctive symptom which will always definitely indicate what organ or tissue intra-peritoneal hemorrhage is derived from, hence our hypothesis must rest on an *ensemble* or aggregation of symptoms rather than any single one.

Since the recent era of revival of intestinal surgery and since, under the new *régime* of antiseptic therapy, several enthusiastic investigators have insisted with great emphasis that the early precognition of intra-peritoneal hemorrhage is of prime importance, in order that its source may be sought out and effective hæmostasis instituted.

But time has demonstrated what has been well known for ages, viz., that intra-peritoneal effusions of blood are rapidly disintegrated by the lymph and that the serous membrane resorbs it with great rapidity. We have further learned from observation on the human body that when a structure is lacerated, as the portal vein, the vena cava or aorta, little can be accomplished by an abdominal section.

Intestinal perforation or rupture may occur as a primary lesion after severe injury of the abdomen or consecutively. The detection of an intestinal rupture by any series of symptoms immediately after injury is quite out of the question, though the presence of great pain is strongly presumptive of it.

It may be suspected, too, when shock deepens with agonizing distress, when the eyes are sunk and the features are pinched. But more than once have mortal cases of perforation been witnessed by myself when there was little or practically no shock; and, on the other hand, in not a few the most profound shock and subsequent acute peritonitis has been observed, but no mortal perforation followed.

As a general rule, however, the persistence of violent pain with great depression and nausea is a fairly reliable indication of intestinal rupture.

Inflating the alimentary canal from either above or below may perhaps aid in deciding diagnosis, but it must be regarded as an expedient attended by more danger than counterbalances the additional knowledge it may convey.

It remains a question thus far whether we should be contented to wait when we are in doubt until reaction sets in and symptoms are better accentuated or press for an exploratory incision. It goes without saying that when such an incision is made, preparation for simultaneous treatment of the rupture in the bowel, if one is found, should be complete.

But it is a procedure of so much difficulty and gravity that it should not be undertaken without deliberation, and never by any one other than an experienced surgeon if such can be had, for sometimes the point of leakage, though easily recognized, is situated in such a part that operative treatment of it is quite impossible in any but experienced hands.

Peritonitis of a traumatic type follows (1) from contusion alone, (2) from hemorrhage, (3) from leakage of the gland ducts or the alimentary canal.

Parietal peritonitis is eccentric or centric; in the former irritation being conveyed inward by the lymphatic vessels from peripheral injuries. This variety is as common as it is generally harmless. It is always associated with a peripheral cellulitis. It is not painful unless the body is moved or when the diaphragm is suddenly contracted. It may be local or general. No paresis of the viscera occurs in this form unless the hypogastrium is the

seat of inflammation, as when the reflexion of peritoneum over the fundus of the bladder is involved vesical paresis and retention of the urine supervene.

Central, or perhap what should be more properly designated *visceral*, peritonitis is altogether a more serious affair and is usually ushered in by a set of symptoms of moderate severity. Such is that which follows the irritation of a large hemorrhage, a moderate bruising of the intestine or fixed viscera, slight leakage of gases or fluids from the intestine, the various ducts, the gall or urinary bladder.

When the peritoneum is inflamed one of the most unvarying symptoms is arrest of peristalsis and enteric paralysis. The patient is constipated and perhaps incessantly vomits. Besides, he has the usual syndrome of fever. The pain of peritonitis is generally of a most agonizing character and is not apt to be mistaken for anything else. Along with these symptoms are the cadaverous features, the painful suspense and mental anguish.

It may be said that peritonitis of various types is an invariable concomitant of all grave abdominal injuries which run into the stage of reaction.

RUPTURE OF THE BLADDER.

When the bladder is distended it rises into the abdominal cavity, pushing the intestines upward and backward. When thus filled it lies close to the abdominal walls and is exposed to rupture by violence, though the healthy organ possesses remarkable resisting qualities to injury even when greatly distended.

It is quite possible that diminutive rents in its walls occur more commonly than we suppose, but that, owing to its own innate tendency to spontaneous repair and the facility with which the peritoneum will absorb aseptic urine, we do not discover them.

Several cases have come into my hospital service for operation which had been diagnosed as bladder rupture. The patient had been crushed or run over some time before. Not being able to urinate, a practitioner being called would possibly introduce a gum-elastic catheter.

He would find that this would go in a great distance, but no urine would flow, and hence the patient would be hurried off to hospital for laparotomy.

On entrance, a careful external examination would reveal a vast zone of dullness which could be marked off over the hypogastrium. A large catheter would be introduced and a suction applied to withdraw the blood-clots. From one to three pints of urine might be withdrawn and that would be the end of the trouble. In another class of mistaken cases in men after injury over the lower abdomen they will complain of great pain in the bladder. Now, if one is not cautious he may again diagnose rupture, though the bladder this time is empty and patulous. A hard catheter will be passed in and its tip may be felt anywhere over the hypogastrium as far up as the umbilicus.

I was notified about a year ago that such a case was in the hospital in need of urgent laparotomy for rupture. By telephone I directed that the bladder should be distended with six ounces of sterilized water, which was then to be withdrawn. This was done, all the water coming back as it entered, unchanged, in the same exact quantity. This is a simple and accurate test when one is in doubt. What causes the deception in these latter cases is the elastic wall of the bladder receding away before the top of the catheter.

In those cases of strongly suspected vesical rupture a positive diagnosis may be made for intra-peritoneal perforation, but the general peritoneal cavity must be opened to reach the seat of injury. To open this under a mistaken diagnosis might cost the patient his life and possibly involve the operator in very serious legal proceedings.

Treatment.—"In the treatment of this class of cases," says Hodgen, "no general line can be laid down, no canon can dictate our course" (Hodgen on "Abdominal Contusion," Holmes' "System of Surgery," vol. xi, p. 491).

As the greater number of cases of abdominal bruises present no serious features, they should be treated on general principles.

Rest occupies a place of prime importance. Our patient should be placed in such a position as affords the greatest comfort. Nature itself enforces this decree. The strained, lacerated and contused muscles of the abdomen refuse to act without a protest, for the least movement of them gives excruciating distress. The activity of all the functions of the economy is sensibly diminished. Breathing is shallow.

The heart's stroke may be increased in frequency, but its impulse is weakened. Secretion and excretion reduce their output, the appetite temporarily fails, the injured patient seeks undisturbed quiet; the plain and emphatic admonition, then, is *rest.*

Protracted manipulation and the institution of tedious diagnostic tests may add much to the patient's sufferings and are prolific sources of augmented distress.

If our patient is not in shock, but suffers pain and is not very weak, our relief measures will be simple. If pain is but moderate and peripheral, local applications will give relief and in a few days our patient will be up again.

In another class, in which the degree of injury is greater and shock is present, the same principles will apply, but as there generally is great depression and severe pain here, stimulants and sedatives are demanded. Heat to the extremities, with alcoholics and opiates, are now called for.

When alcoholics can be borne they are of infinite value judiciously administered.

They exhilarate the drooping spirits, reduce pain and favor sleep. In cases of severe abdominal pain morphine must be conjoined and freely administered; but we must be cautious not to narcotize and in this manner destroy the life we are endeavoring to save.

A broad binder over the abdomen in some cases gives great comfort, but where there is a tendency to tympanites the belly must not be encumbered by any description of compress. It is highly important to bear this in mind in male cases, for with them respiration is largely diaphragmatic. Hot or cold applications over the abdomen, according to which gives the most comfort, should be applied.

The Use of Mercury.—My own experience has convinced me that mercury freely administered early after an abdominal traumatism exercises most potent properties in preventing or greatly modifying inflammatory processes in the serous membranes. In these cases it should be employed by *inunction* and continued until the gums are touched or the danger of general peritonitis is past.

Surgical Interference.—But what shall be done in those grave cases in which we are reasonably assured that there is a large hemorrhage or rupture of the bowel?

As heretofore stated, the general opinion now is that one should not laparotomize during shock. There are aggressive young surgeons who would allow almost nothing to stay their hand were they only certain of intestinal rupture.

We may gather an impression of the extremes in this direction from the following paragraph by Dr. J. D. S. Davis, of Birmingham, Ala. ("Medico-Legal Aspects of Intestinal Surgery," Boston *Medical and Surgical Journal*, January 28, 1892): "There are those who condemn all mechanical aids for intestinal repair; know not how to use them, never saw them used, refuse to indorse a resection for a gunshot or stab wound, and are known to go on the stand for purposes of condemnation and disproval when they know no more about intestinal surgery than a wild Indian about school-teaching."

Contemporaneous surgical literature chronicles some few successful cases laparotomized for rupture of the intestine following contusion of the abdomen. The worst of it is that some surgeons who have had bad results are often swayed by motives of expediency and policy not to publish all their failures; hence no reliable table of statistics can be had.

Michaux lays down rules for our guidance based on his own extensive experience and supported by such rational deductions that it has seemed to me they may be, in part at least, adopted here as our safest guide when we are called in to treat this class of cases.

"Interfere at once," he says, "when there are unequivocal symptoms of perforation or large internal hemorrhage, for however deplorable such intervention may be, it is our patient's only hope."

He most judiciously insists, however, that in the vast majority of abdominal injuries the internal organs escape, though immediately after injury it may be difficult to distinguish the milder from the more grave type.

For this reason, in the average case he recommends delay until symptoms of peritonitis appear, when the indications for interference are formal.

[TO BE CONTINUED.]

MY son, if a person calls you an ass, do not kick. That would only serve to corroborate his assertion.—*Boston Transcript.*

DR. OLIVER WENDELL HOLMES.*

GEORGE T. WELCH, M.D., PASSAIC, N. J.

The death of this veteran physician, poet and literary genius will give rise to a host of valuable recollections and comments from all who knew this or that side of his varied character. For in his old age, like a genial, sparkling flame on a winter's hearth, he has shed cheer and revivified the emotions of all who have come within his influence. But while others praise his debonnair philosophy, his inexhaustible good humor, his sparkling muse, I would chiefly recall his value to us and to humanity as a physician.

While so much is still nebulous in our great art—the greatest of all arts, for it deals with life itself—yet fifty years ago medical men dealt with obscurities that we can scarcely comprehend, so far upward have we struggled out of the mists that confused our fathers. Few great principles have sprung fully developed into the intellectual world but first existed as surmises, at length as theories that stood on no very certain foundation, and finally under the observation and experiment of widely dissevered minds the truth has been established. The germ theory of disease is a notable instance in point. You can scarcely open the pages of an author of note writing during the past two or three hundred years or so but you will find allusions to something in the air fomenting and aggravating certain diseases. As time went on the doctrine was accepted like the Scotch verdict—unproven but believed. While in our own memory it has been investigated by many scientific men and demonstrated beyond cavil by Tyndall and numerous microscopists here and abroad.

The contagiousness of puerperal fever had been asserted here and there during the last century, Gordon in 1795 saying: "I arrived at that certainty in the matter that I could venture to foretell what women would be affected with the disease upon hearing by what midwife they were delivered," but the fact of the contagion was denied more than fifty years afterward by such men as Hodge and Meigs in America. Dr. O. W. Holmes in 1843 published his affirmative observations as to the fact of its contagiousness and was assailed with virulence by Meigs for the position he had assumed. Hodge was more courteous, but none the less an opponent. "You can never convey," says he in 1852, "in any possible manner, a horrible virus, so destructive in its effects and so mysterious in its operations as that attributed to puerperal fever." Meigs followed, in 1854, in his more prejudiced and rancorous manner. He attacked Holmes with much bitterness, and assured the students who attended his lectures and the public that read his books that "in the propagation of puerperal fever they could have no more to do than with the propagation of cholera from Jessur to San Francisco and from Mauritius to St. Petersburg;" but the irresistible array of evidence and the conclusions derived from them, marshaled by the indomitable Holmes, forever put the question at rest in America and helped to mold opinion on the continent. Whoever has read Holmes' masterly essay on this topic must have felt the force of his original genius and his rich good nature, even if he had never read a line of any other of his works. His keen, good-humored satire cut Meigs to the bone and set our fathers laughing, and he who has laughter on his side does not need to blow one blast on Roderic's hunting horn to summon a thousand men.

Meigs in his diatribe made an appeal to his students, calling them "dear young friends," "dear young gentlemen," and seeking to poison them against Holmes by specious reasoning and appeals to their affections. Holmes retorted that the "dear young gentlemen" might know what to expect, from his own case, if they happened not to think as their master did. "You have naturally faith in your instructors," wrote Holmes, "turning to them for truth and taking what they may choose to give you; babes in knowledge, not yet able to tell the breast from the bottle, pumping away for the milk of truth at all that offers, were it nothing better than a professor's shriveled forefinger."

* Read before the Passaic City Medical Society, November 14, 1894.

Holmes did an immense service to the profession and to the public at large in his "Homœopathy and Its Kindred Delusions." The former has long since trenched upon our rational system of medicine to that degree that it has lost its distinctive character, and having become a greater fraud than ever before, trading as it does under false colors, it only keeps up its semblance by appealing to a sentiment, and may be very well dismissed from further consideration here.

But it was in his essays on "Currents and Counter-Currents in Medical Science" and "Border Lines of Knowledge in Some Provinces of Medical Science" that Dr. Holmes endeared himself to the progressive minds in medicine. It was here that this genial teacher dealt such trenchant but withal happy blows at the heroic treatment of his time. With the exception of Forbes in England and Bigelow in America he was almost alone in this manful strife, and for a time his fearless utterances alienated the friends of his life; but his was not one of those politic cowardly souls that bend with the current, but like another Hercules he bent the current his way and lived to see his views established in the practice of our later time, though God wot there is enough delusion even now.

"Much," said Holmes in his "Border Lines," "which is now very commonly considered to be the result of experience will be recognized in the next or in some succeeding generation as no such result at all, but as a foregone conclusion based on some prevalent belief or fashion of the time."

"There are, of course," said he, "those who go about the work of the day, doing it according to the rules of their craft and asking no questions of the past or of the future, or of the aim and end to which their special labor is contributing. These often consider and call themselves *practical men.* They pull the oars of society and have no leisure to watch the currents running that way; let theorists or philosophers attend to them. In the mean time, however, these currents are carrying the practical men, too, and all their work may be thrown away, and worse than thrown away, if they do not take knowledge of them and get out of the wrong ones and into the right ones as soon as they may. Sir Edward Parry and his party were going straight toward the pole in one of their arctic expeditions, traveling at the rate of ten miles a day. But the ice over which they traveled was drifting straight toward the equator at the rate of *twelve miles a day,* and yet no man among them would have known that he was traveling two miles a day backward unless he had lifted his eyes from the track in which he was plodding."

Ever since Bigelow, in 1835, delivered his celebrated discourse on self-limited diseases, a gradual change began to work in the practice of our profession. It was seen that many diseases must leave the system of the sick man because of a great law of nature and not because of the drugs that he may have swallowed. Indeed, it is no secret that many get well in spite of the drugs that have mistakenly been pressed upon them. The tremendous chemic force of the body has wrestled with the poisons that have been stupidly administered, changing them in character, rendering them innoxious, and where this was impossible has eliminated them at the same time that it was wrestling with a deadly disease and holding it at bay until the laws of its own nature destroyed it at the appointed time. The knowledge of this principle caused Holmes to exclaim: "I will venture to say this, that if every specific were to fail utterly, if the cinchona trees all died out, and the arsenic mines were exhausted, and the sulphur regions were burned up, if every drug from the vegetable, animal and mineral kingdom were to disappear from the market, a body of enlightened men, organized as a distinct profession, would be required just as much as now, whose province should be to guard against the causes of disease, to eliminate them if possible when still present, to order all the conditions of the patient so as to favor the efforts of the system to right itself, and to give those predictions of the course of the disease which only experience can warrant. Great as the loss would be if certain active remedies could no longer be obtained, it would leave the medical profession the most essential part of its duties and more than its present share of honors; for it would be the death-blow to charlatanism, which depends for its success almost entirely upon drugs, or at least on a nomenclature that suggests them."

Some of Holmes' aphorisms are more pointed than any others written by medical philosophers.

"The best proof," says he, "that the community is overdosed is that no families take so little medicine as those of doctors, except those of apothecaries." He bluntly asserts that when talking of their treatment doctors count only their favorable cases, and tells that old story of Lord Bacon's of the gifts of shipwrecked people hung up in the temple, "Behold! they vowed these gifts to the altar, and the gods saved them. 'Ay,' said a doubting bystander, 'but how many made vows and were shipwrecked notwithstanding?'"

"One of the most ancient of superstitions is that disease is a malignant agency or entity, to be driven out of the body by offensive substances, as the smoke of the fish's heart and liver drove the devil out of Tobit's bridal chamber."

He quotes Pliny as saying that "the cerates and cataplasms, plasters and collyria and antidotes," abundant in his time, as in more recent days, "were mere tricks to make money."

Of the self-complacency of the physician who announces that he has discovered a remedy or a system that has conquered or will conquer a certain deadly disease from this time on, Dr. Holmes alludes to the attitude of Benjamin Rush in 1799, when he believed that he had mastered yellow fever. "Thank God!" cried Rush, "out of one hundred patients whom I have visited or prescribed for this day I have lost none." "Where," exclaims Holmes, "was all this legacy of knowledge when Norfolk was decimated? Where was it when the blue flies were buzzing over the coffins of the unburied dead piled up in the cemetery of New Orleans at the edge of the huge trenches yawning to receive them?"

In speaking of the sublime effects of fresh air and proper sanitation, he tells how Dr. John Clark by a simple measure of ventilation saved more than sixteen thousand children's lives in a single hospital, and pointedly asks, "How long would it have taken small doses of calomel and rhubarb to save as many children?"

In reverting to that old Spartan rule of exterminating the hopelessly sick children of the tribe, he stoutly asserts that "hydrocephalus, tabes mesenterica and other similar maladies are natural agencies which cut off the children of races that are sinking below the decent minimum which nature has established as the condition of viability before they reach the age of reproduction. They are not so much diseases as manifestations of congenital incapacity for life."

When I set out to write this short essay I thought to compile many of Holmes' wise and witty sayings, but looking into his book was like looking into Macbeth's glass, where the long line of kings stretched out indefinitely, for where I saw one fine passage twenty others were on their feet and clamoring to catch the speaker's eye, so that I have been obliged after all to give a meager showing. But I would advise any one who has not dipped into that treasury to read his "Medical Essays" at once. It is a virile book and will beget thought in a man's head.

Quite Libelous.

A young woman from Baltimore who had been in the Far West was telling a New Yorker about it.

"And away out in the mountains I met such an educated Chicago man," she was saying in the impetuous way of a Baltimore girl.

"A what?" asked the New Yorker in astonishment.

"An educated Chicago man away out in the mountains," she repeated.

The New Yorker was silent for quite a while.

"What strange contradictions one finds in the West," he said, and the girl looked at him wonderingly.—*Detroit Free Press.*

A CHINAMAN lately returned from a trip to Europe treated his countrymen to the following description of the piano: "The Europeans keep a large four-legged beast which they can make sing at will. A man or more frequently a woman, or even a feeble girl, sits down in front of the animal and steps on its tail, at the same time striking its white teeth with his or her fingers, when the creature begins to sing. The singing, though much louder than a bird's, is pleasant to listen to. The beast does not bite, nor does it move, though it is not tied up."—*Das Neu Blat.*

CLERGYMAN (visiting prison)—So you were arrested for passing bad money, my man! Convict—Not exactly, sir! You see, if the money had passed I wouldn't have been arrested.

COMMUNICATIONS.

THE SURGICAL TREATMENT OF GENERAL PERITONITIS DUE TO THE DISSEMINATION OF SEPTIC PRODUCTS.*

OSCAR H. ALLIS,† M.D., PHILADELPHIA.

With the confident assurance that a patient has general peritonitis of septic origin, the surgeon of to-day does not hesitate to open the abdominal cavity, repair, if possible, the origin of the disease, and follow this with a thorough flushing of the infected region with properly tempered water; and with what result? Death so promptly and inevitably as to discourage both surgeon and physician from ever attempting it again. Yet such cases are purely surgical, and if any succor is ever to come to them it must be through open surgical measures. These two considerations have alone prompted me to bring this subject before the Academy to-night, and though I have nothing hopeful to offer in the way of practical experience, I hope in a comparison of this affection with kindred diseases to offer at least a suggestion for a future course of procedure.

At the outset, let me repeat that I shall have nothing to say upon the origin of the disease or the treatment of the primary lesion; my topic is the treatment of general septic peritonitis, from whatever cause it may arise.

First, is there anything in the nature of the peritoneal membrane itself that makes it so fatal? If we compare the diseases of the thorax with those of the abdomen the question can be answered in the negative. The pleura is originally a part of the general serous membrane and, of course, identical with that of the abdomen. Purulent pleurisies are treated to-day with great success. What are the conditions present and on what does the success depend? The conditions present are the covering of the entire lung and thoracic cavity with a foul, poisonous exudate and the pouring out into the thoracic cavity of a putrid, offensive purulent fluid. The accumulation is accompanied with pain, fever from the absorption of septic products, difficulty of breathing from mechanical interference, loss of appetite and emaciation, and, if unrelieved, death. The relief of such a case is simple and should be carefully inquired into. In its simplest form the treatment consists of free, dependent, unobstructed drainage. Under such treatment so many have gotten perfectly well that one must seriously ask if water is used to wash out the cavity, of what use it is. Water used upon an indolent leg ulcer may wash away the effusive accumulations; but it does not, surgically speaking, clean the ulcer. Water medicated, as a strong mercurial solution, does not surgically cleanse the ulcer. It may destroy the superficial layers of the diseased germ-bearing tissue and render a necessity for dressings less frequent, but to cleanse away the diseased semi-organized tissue the knife must be used and the whole cut away, or the curette employed and the surface scraped until a healthy base is reached. Then, and only then, have we removed the foul covering of the ulcer and obtained a surgically clean surface as a basis of repair.

When we use a simple or medicated fluid in the thoracic cavity we wash away, if the opening be sufficiently free and the stream ample, the dead effete products of the pseudo-membrane that lines the thoracic cavity and covers the lung. The washing does not purify, surgically speaking, the exudate, and even if we employ the so-called germicidal fluids, effect upon the pseudo-membrane is only upon its surface. It may, as in the case of the leg ulcer, diminish the quantity of pus and the frequency of dressing, but it cannot wholly eradicate or destroy the exudate.

Seeing, then, that recoveries take place in purulent pleurisies from drainage without washings, as well as from drainage with washings, the conclusion must inevitably follow that *the essential feature of treatment is drainage.*

But we must not omit a further inquiry

*Read before the Philadelphia Academy of Surgery, October 1, 1894.

†Surgeon to the Presbyterian Hospital.

into the case, namely, the nature of the pus cavity, for that it really is. The answer to this question is, I believe, the key to the success of treatment. In some cases the pus chamber is a simple cavity. The lung has shrunken and is far removed from the surface of the ribs. In this class there is no apposition of visceral surfaces and no hindrance to drainage, and if the openings are dependent and ample, the treatment will be unattended with relapse or annoyance. In other cases, owing possibly to previous pleurisies, there are pockets of pus, and imperfect drainage, at best, is obtained. In such cases the dead elements of the exudate are retained in pockets, and the result is imperfect, unsatisfactory response to treatment, and death, though delayed, finally ends the scene.

Let us now take up the conditions present in a purulent peritonitis. My subject demands that I treat this condition when it is full-blown and general; but before doing so I will delay a moment to show the analogy between a local peritonitis due to septic products and the condition present in a purulent pleurisy. In both a serous membrane is involved; in both the abscess cavity is walled off with pseudo-membrane; in both the recovery is chronic, and can only take place by the slow removal of the exudate and its replacement with healthy granulations, and in both drainage, free and unobstructed, is an uncompromising essential. The success of the operation for the relief of local purulent appendicitis depends not on washing out the cavity with antiseptic lotions, *but in preserving in its integrity the wall of lymph* that has been formed to limit the progress of the disease and prevent septic material from infecting the general peritoneal cavity. So long as a pus chamber can be kept patulous and the elements of decomposing pus and tissue readily removed, the progress of such cases is to health.

Now what are the conditions in a general peritonitis? Not one, but scores of pockets of poisonous matter—pockets everywhere —with lymph covering every *tissue* of the abdomen. To remedy this the surgeon enters with his hand and carries a clean warm fluid into every part of the cavity. He breaks open a great number of pus chambers and removes the ptomaines and leucomaines that are doing their deadly work. So far very well; but this to be effectual must be repeated. The washing does not purify the exudate—more effete products will be cast off and must be gotten rid of. Some means must be taken to prevent adhesions taking place, while at the same time the elements of putrefaction and necrotic waste must be removed. Whether drainage-tubes passed to the most dependent parts of the cavity, as a means of continuous flushing, would prevent reattachments, can only be learned by trial. Such a course will be of no real value if partial or trifling. The waste must be driven off and the stream kept up constantly night and day, until the normal surfaces have regained their tone and thrown off the exudate. Under a continuous system of flushing or irrigation, the waste products would be made to float constantly to the surface and be more effectually carried off than by dependent dossil drainage.

Such a course may commend itself to some surgeons, and as it has already been recommended in whole or in part, it will no doubt ere long receive a fair intelligent trial. To my mind the following seems more in keeping with nature's own plan.

As drainage is the basis of recovery in the allied conditions referred to, I cannot conceive of any adequate dependent drainage except a long median incision—kept open by proper packing—*with the patient prone* except at the times of dressing. To prevent the sides of the incision from closing or the intestines from uniting to the lips of the incision, rubber dam thoroughly covered with cerate could be tucked between the abdominal wall and the intestines on each side, with one border emerging from the incision. At the same time, to retard, if not prevent, adhesions of the contiguous coils of intestines, the whole serous surface could be well covered with a lubricant-like cosmoline or cerate. If the abdomen has been previously flushed with water, the cavity should be dried before the application of the cerate. Were it not that the adhesions tend constantly to form, I should be sanguine that the *prone* position alone, maintained constantly for weeks, would result in recovery. To guard against these, it would seem wise to reënter the cavity on the following day, and reapplying cerate to the walls of the cavity and the entire surfaces of its contents, redressing with rubber dam as before, again place the patient prone.

With dependent drainage, with an ample wound kept patulous, all water save such as is necessary to preserve outward cleanliness could be dispensed with. A difficulty might be experienced in keeping the patient in the prone position. This could be accomplished by means of a thin, well-padded strip of wood two or three feet long, strapped transversely to the pelvis.

Although this is the purest theory, it is theory based on successful treatment of allied affections. It is treatment of an extensive pus cavity with adequate dependent drainage. Drainage from the rectum or vagina may be serviceable when a local pelvic peritonitis is under consideration, but when general, nothing short of a long six-inch median abdominal incision will be adequate for the vast area of disease, and this only can do the work when the incision is freely patulous and made dependent by the persistent prone posture.

In closing, I wish again to call the attention of surgeons to the statement made in the beginning, that the disease under consideration is of a purely surgical character, and that the responsibility in a great measure of its successful management rests with them. Nothing more weighty, nothing more important demands their attention.

LIGATURE OF THE SPERMATIC CORD IN THE TREATMENT OF HYPERTROPHY OF THE PROSTATE GLAND.*

J. EWING MEARS, M.D., PHILADELPHIA.

In the male subject the function of the generative apparatus involves the secretion of semen, and, under certain conditions, its ejaculation. The former is accomplished in the testes and the latter by the vasa deferentia, the vesiculæ seminales, the prostate, the urethra and penis.

In order to explain certain forms of hypertrophic changes occurring in the prostate gland, I think it necessary to consider the anatomical structure of the ejaculatory apparatus. Portions of this are tubal in character, forming ducts or canals, as the vasa deferentia and urethra; the vesiculæ seminales are positive organs, not mere receptacles for the accumulation of semen, but possessing secretory power; the prostate is more of a muscular than a glandular organ. As determined by the investigations of Kölliker, the glandular substance does not constitute more than one-third or a half of the whole mass; the vasa deferentia, according to the same author, are endowed with a colossal muscular apparatus and are stated to be chiefly operative in ejaculation. The seminal vesicles and ejaculatory ducts exhibit the same muscular structure as the vasa deferentia. All parts of the ejaculatory apparatus possess what is essential to their functions—a redundance of muscular fibers. I refer to these well-known anatomical facts in orde that they may be considered in connection with certain forms of prostatic hypertrophy.

Enlargement of the prostate may be due to inflammation—acute or chronic—sometimes eventuating in abscess; cystic degeneration, which is rare; tuberculosis; myomatous growths; carcinoma; simple hypertrophy. Cystic, tubercular, and carcinomatous affections of the prostate may be eliminated from consideration on this occasion as being without the circle of conditions possible to be relieved or in any way affected by the plan of treatment to be discussed. The remaining affections clinical observations have, I think, satisfactorily determined as enjoying intimate relations with the functional activity of the secretive organs of the generative apparatus, and therefore affected by any conditions which control this.

An organ in a state of inflammation requires, in order that it may return to a normal condition, a cessation, so far as it is possible, of its function; if this is not accomplished the inflammatory action progresses, with the resultant effects of plastic deposit, increase in size, the course of the inflammatory action terminating in this stage, or possibly continuing to the suppurative stage.

In myomatous growths of the uterus

* Read before the Philadelphia Academy of Surgery November 5, 1894.

clinical observation records the fact that in married women, or in single women in whom the sexual activity of the generative organs is maintained, these develop more rapidly and attain a larger size than in the unmarried female or in the single female who does not indulge in sexual congress.

Clinical investigation has also determined the fact that simple hypernutrition is the result in many instances of overstimulation; of inordinate functional activity. In this manner it is possible to account for simple hypertrophy of the prostate, that condition which more than any other is responsible for the serious secondary conditions manifested in the urinary apparatus. With this condition the surgeon has to deal oftener than with any other form of hypertrophy occurring in the gland. Examination of specimens of prostate glands affected with simple hypertrophy shows, according to Billroth, that there is no increase in the glandular elements, but simply expansion of the acini and epithelium hyperplasia. The frequently observed enlargement of the gland depends essentially on diffuse myoma.

The question as to the occurrence of hypertrophic changes in the prostate gland at a period of life when on all other glands and tissues of the body the law of atrophy assumes sway, has often been asked, but never satisfactorily answered. May the answer not be found in its anatomical structure and in its anatomical and physiological relations? In structure and function it is composite. The arrangement of its muscular fibers would seem to indicate that their duty was more than that which relates to the function of the glandular portion of the organ—more than the simple expulsion of the secretion of the gland into the general ejaculatory canal. Placed near the culmination of the forces concerned in the expulsion of the spermatic fluid, its function would appear to be that of a reinforcing agent—of giving increased propulsive movement to the column of fluid which, it may be, comes only from the seminal vesicles or from both vasa deferentia and seminal vesicles. Is the hypertrophy, therefore, conservative in character, occurring at a period of life when nerve power declines and the other muscular portions of the ejaculatory apparatus yield to the law of atrophy?

It is my observation that the form of hypertrophy under discussion occurs in those who have over-indulged the sexual appetite—who have kept the generative organs in a prolonged state of excitement with, in many instances, incomplete acts, or without acts of coition, these conditions resulting in over-stimulation of the gland.

Coming now to the plan of treatment suggested in the title of this brief paper, it would appear to be both philosophic and physiologic, as an effort has been made to show that the pathologic condition present is directly associated with the functional activity of the generative apparatus. Obliterate this, and all organs associated in the production of this function will be affected. Without the organs for secretion of semen the ejaculatory apparatus has no function.

The eminent Rokitansky long since observed that the prostate is generally found to be small when the organs of generation are in imperfect condition, and a diminution of the prostate with relaxation of the glandular tissue has been observed as accompanying atrophy of the testes.

To obliterate the function of the generative apparatus is therefore a rational method of treatment in prostatic hypertrophy of the forms above mentioned. How can this be accomplished? Dr. J. William White, in an elaborate paper on "Surgery of the Hypertrophied Prostate," read before the meeting of the American Surgical Association in 1893, referred to the operation of castration as a therapu-e tic measure in hypertrophy of the prostate, and reported a number of experiments which were conducted on dogs, showing that removal of the testes in these animals was followed by prostatic atrophy. Without doubt castration would prove effectual in the production of atrophy, and the reports of cases have appeared in recent current surgical literature in which very positive relief was afforded by the operation. It is an operation, however, to which patients will naturally refuse to submit unless in the very last stages of disease of the bladder resulting from prostatic obstruction.

In the discussion which followed the reading of Dr. White's paper I suggested the ligature of the vas deferens as an operation which would probably be as efficacious as castration, and one which I believed would be more readily accepted by patients. I have seen the report of one case

in which this operation has been performed since that date with a successful result.

Within the last year I have taken occasion to examine patients on whom I had performed subcutaneous ligature of the vessels of the cord for varicocele, and I have observed more or less atrophy of the testes in these cases. In all the vas deferens was not excluded in the ligature. One patient, aged at the time of the operation eighteen years, reported that subsequent to the operation nocturnal emissions, from which he had suffered greatly, disappeared, showing, I think, the relief afforded to prostatic irritation by the operation.

Inclusion of the vas deferens in the ligature applied to the vessels of the spermatic cord would effectually, I believe, produce atrophy of the testes, and the operation is not increased in gravity. It might be advisable to apply the ligatures at intervals of time.

The gradual disappearance of the sexual function would not disturb the mental condition of the patient, as many realize it from other causes, and the consolation he would derive from the presence of the testicles, with relief from suffering, would, I believe, fully compensate. In all cases the patient should be informed of the character of the operation and what is intended to be accomplished by it. With him should rest the decision. I regard it the duty of the surgeon, however, to urge very earnestly the performance of any operation which will be efficacious in terminating the sufferings, sometimes horrible as they are, of patients suffering from the results of prostatic obstruction.

LITHOTOMY AFTER PARTIALLY SUCCESSFUL CLOSURE OF EXSTROPHY OF THE BLADDER—SUBSEQUENT CONSTRUCTION OF A PERINEAL URETHRA FROM SCROTAL TISSUE.*

JOHN B. ROBERTS, M.D., PHILADELPHIA.

In March, 1893, a child, aged eight years, with exstrophy of the bladder, was brought to me at the Polyclinic Hospital for treatment. The mother told me that when three or four years old he had been operated on at the Children's Hospital. It was evident that some improvement in the condition had been made by this early operation, because the posterior wall of the bladder did not protrude, as is often the case, but formed a rather shallow cup at the base of the rudimentary penis. The flaps had evidently been taken from the surface above the congenital defect and at its two sides, as in Wood's operation, for the cicatrices in these regions were apparent. The urine ran from the bladder over the penis and scrotum, and also escaped from linear sinuses along the top and sides of the thickened tissue which closed the upper portion of the cleft in the bladder.

As a first step in the operation I endeavored to produce a perineal fistula by thrusting a curved needle from the base of the bladder through the perineum, behind the scrotum, and conducting a drainage through the opening so made. The tube was increased in size at various intervals until at the end of two months there was a canal which would contain a rubber urethral bougie of moderate size.

I then etherized the patient a second time, and made a circular denudation around the edge of the open bladder. The rudimentary penis, consisting of the spongy body, the cleft glans and cleft prepuce, was entirely removed. Cylindrical masses on each side of the opening in the bladder, which appeared to be the representatives of the cavernous bodies, were also dissected away. A piece of soft rubber catheter was then introduced through the perineal opening established by the first operation, and its end allowed to reach the floor of the bladder. The purpose of this procedure was to secure downward drainage of the urine after the edges of the bladder were brought together.

Seven deep sutures were next inserted in a manner to bring the denuded edges of the bladder wall into apposition in a vertical direction. The wound was then sealed with iodoform and collodion.

* Read before the Philadelphia Academy of Surgery, November 5, 1894.

The perineal tube, however, soon became blocked with muco-pus, which was continually flowing from the irritated mucous membrane of the bladder, and was not satisfactory as a drain. I finally passed a drainage-tube from one of the upper sinuses directly through the bladder and out of the perineal opening, in order to prevent the sutures in the middle line from yielding. These middle sutures, however, finally gave way, and when the patient passed from observation there was a large opening in the middle of the attempted closure. Some union had, however, been obtained. The perineal opening showed a marked tendency to close.

I did not see the patient again until October, 1894, sixteen months later. At this time the perineal opening had entirely closed and its scar was inconspicuous, but the exstrophy of the bladder was completely covered by the new anterior wall. At about the middle of this wall, which had been constructed in the manner described, was a small opening of sufficient size to admit the end of a large probe. At the upper and right-hand side of the portion of the wall which had been constructed in infancy was a linear sinus about an inch in length. This was situated at one of the points which, when I first saw the child, allowed the urine to escape. There was a little oozing of urine from the small central fistula, but the major portion escaped from the sinus at the upper right-hand border.

The mother said that the patient suffered severe pain, which was evident by his crying at the least touch of the skin in the neighborhood of the central sinus. The insertion of a probe made it evident that the new bladder contained calculi. The child's general condition was poor, and it was evident that he had been suffering greatly. The offensive character of the urine and the difficulty of keeping him free from its odor caused me to give him small doses of turpentine, which, as is well known, imparts a peculiarly agreeable odor to the urine. This device seemed to render the patient less offensive to the others in the ward.

A few days later I enlarged the opening in the middle of the bladder wall in front and found the cavity filled with calculi. They were ten in number and varied from five-sixteenths to five-eighths of an inch in diameter. Their combined weight when not dried was 195 grains.

It seemed to me that the establishment of a perineal urethra lined with skin would afford efficient drainage to the new bladder and would remain patulous. I therefore determined to cut a channel between the perineum and the floor of the bladder, and turn in flaps of skin taken from the scrotum. As a first step I incised the scrotum in the middle line and removed both testicles. I then made a puncture downward from the base of the bladder to this scrotal incision. This permitted me to utilize the scrotal tissue for lining the new channel. By two horizontal incisions on each side of the opening I obtained strips of scrotal skin and superficial fascia half an inch wide and an inch and a half long. To the inner end of these, ligatures were fastened and the threads carried upward through the new urethra. The cutaneous flaps were then drawn up along the canal into the bladder, and were then sutured on each side of the incision in the middle line of the anterior bladder wall. This maneuver lined both sides of the perineal opening with skin from the perineum to the anterior bladder wall. A drainage-tube was inserted to keep the channel patulous, and the bladder and tube were washed out.

No attempt was made to close the opening in the middle line or that at the upper and right-hand side. I deemed it better to leave these open for convenience in flushing the foul bladder cavity. It was my intention to close these at a later period. The edges of the wound in the perineum left by the plastic operation were brought together with sutures, and healed promptly. Antiseptic solutions were used for washing out the bladder and tube, and the patient did well for several days. His temperature was not high, and the drainage through the perineal tubes was quite satisfactory, though not always perfect. At the end of three or four days he began to lose his appetite and vomited occasionally. He died on the fifth day, apparently from exhaustion.

An autopsy showed disease of the left kidney, which was riddled with small abscesses. The ureter on this side was double, and showed great enlargement of the caliber and thickening of the walls. The pelvis of the kidney and the double

ureter were filled with pus. Just before the two ureters of this kidney reached the bladder they united and opened into the bladder by a single orifice. The right kidney and ureter appeared to be normal.

The specimens presented will make the description of the case clear, since Dr. Bannister, the resident physician, removed the whole bladder and scrotum with the attached ureters and kidneys. I believe this method of constructing a perineal urethra and lining it with skin from the scrotum will be found an efficient device in dealing with these unfortunate cases. It is very probable that the child would have lived if I had taken this step originally, instead of making an opening into the perineum without cutaneous lining.

TRANSLATIONS.

THE MEDICAL TREATMENT OF CANCER OF THE STOMACH.*

Plicque (*Gaz. Méd. de Paris*, July 28, 1894) remarks that at first sight the treatment of cancer of the stomach seems illusory and discouraging. Patiently directed, it may, nevertheless, effectually combat the pain, the hematemesis, the digestive troubles and the progressive cachexia. The cancerous tumor may be simulated by an epiploic inflammation, an accumulation of fecal matter in the transverse colon, and even by a simple partial contraction of the recti muscles. Having made the diagnosis the following treatment may be instituted.

1. For the pain the vesicatories may be employed, the hot iron point, the morphine vesicatories, local applications of chloroform. Among the most efficacious external applications are the actual cautery and applications of hemlock. The cautery not only controls the pain, but often also the dyspeptic troubles. The only precaution in the case of the existence of a growing tumor near the skin is to apply the cautery at some distance. If this be not observed the complication well noted by Feulard, namely, gastro-cutaneous fistula, may be produced. Applications of hemlock or of a pomade of the extract of hemlock are valuable in controlling the pain. A useful precaution is to recommend to the patient not to touch the eyes after having handled these preparations; very often painful visual troubles may result from this cause alone. Subcutaneous injections of morphine should not be employed unless the diagnosis of cancer is absolutely certain. It will often aggravate dyspeptic troubles. Condurango employed internally will permit the physician often to escape recourse to injections of morphine. Its sedative action is such that some German authors have attempted to make condurango a means of diagnosis. One of the best modes of preparation is the infusion. It is prescribed as follows:

Fresh bark of condurango, 15 grams; infuse for fifteen minutes in 30 grams of water; take in teaspoonful doses.

The alcoholic tincture may also be prescribed: Alcoholic tincture of condurango, 10 grams; gum julep, 120 grams. Teaspoonful doses.

Or simply the powder may be given: 50 centigrams in a cachet, of which six to eight may be taken daily.

2. *Hematemesis.*—The hematemesis of cancer is ordinarily slight in amount and repeated. Melena is more frequent than hematemesis. It is rarely required to treat a large hemorrhages as in ulcer, but the small hemorrhages should be energetically treated because they are the great cause of the cachexia. One may employ as the principal means: (*a*) *Acidulated drinks*, especially the weak hydrochloric solution, as 2 to 1,000, of equal service in dyspepsia. (*b*) Parden intended to make a sort of dressing for the gastric ulceration. Peter's formula is excellent: Crude opium, 0.02 centigram; subnitrate of bismuth, 2 grams; make into a paper; one paper before each meal. Antipyrin in cachets of 1 gram constitutes also a very good hemostatic agent. While lavage of the stomach in cancer may be made, it is wiser to abstain from them.

* Translated for THE MEDICAL AND SURGICAL REPORTER by W. A. N. Darland, M.D.

3. Against the dyspeptic troubles the weak hydrochloric solution, strongly indicated by reason of the hypochlorhydria of cancer, and condurango, especially of service in case of gastric catarrh (watery vomiting of cancer), have been already mentioned. Sodium chlorate, recommended by Brissaud, gives in some patients most excellent results. This salt, being slightly toxic, may be given in doses of 12 grams or more daily; ordinarily 4 to 6 grams are given. It is very soluble and may be easily taken in milk. On account of the disagreeable taste some patients will only take it in cachets. In the case of excessive gastric fermentation the employment of the weak hydrochloric solution, chloroform water diluted to a third, and intestinal antiseptics must be employed. One of the best antiseptics, as has been shown by Gilbert, is benzo-naphthol, which is well tolerated by both the stomach and the kidneys. Daily, after the meals, 2 to 8 cachets of 50 centimeters each should be given. Magnesia is a drug very inoffensive and very useful in doses of 2 to 4 grams daily. For the vomiting the ordinary measures must be adopted: Seltzer water, Rivière's potion, champagne, ice. Gavage, the tube not being introduced further than half-way down the esophagus, is very valuable in uncontrollable vomiting. Anorexia is not controlled by any remedy save perhaps condurango. Gavage constitutes a useful extreme resource. The diet must be attended to and the ordinary laws of general hygiene observed—friction of the skin, moderate exercise, plenty of fresh air. Hydrotherapy and massage are very useful to maintain a certain tonicity and a seeming vigor.

CORRESPONDENCE.

REMINISCENCES OF DR. HOLMES.

DEAR DR. KYNETT:

Your kind, urgent and repeated request for me to give you some reminiscences of Dr. Oliver Wendell Holmes can no longer be refused. But let me insist that if you publish what I write my name be omitted, for I abhor any apparent seeking of notoriety by having that name appear in connection with the illustrious dead. So many doctors take "trade" ways of getting their names before the professional and the lay public that I am anxious to avoid even the semblance of the sin.

My acquaintance with Dr. Holmes was chiefly through correspondence. Only once did I have the privilege of a long interview, but at that time he was, according to a mutual Boston friend who was with me, "in his best vein," a very fortunate fact for me. Of that interview I shall speak presently.

Dr. Holmes was so kind, so considerate, so self-sacrificing and helpful to me on more than one occasion when I made appeal, that my debt of gratiude was great. I admired and loved him and his memory is very precious. Many a year ago I sent him a copy of an address upon the Odyssey as illustrating the trials and temptations, the difficulties and dangers of life, and he replied, thanking me for the pamphlet, giving kind commendation and adding that he always read the great poem for "pleasure, never before thinking of a moral in it."

A few years afterward it was my duty to deliver an address before an important medical organization, and I had selected a subject possibly too ambitious for my ability, but was especially desirous that there should be no flaw in the logic and no failure in the rhetoric. Before its delivery I therefore had proof slips sent to Dr. Holmes and to the Rev. Dr. McCosh—alas! he too is gone—requesting from each his criticism. Both these eminent men kindly responded, and of course my work was greatly improved by their suggestions and advice.

The last letter he sent me was written on the third day of last January, and is as follows:

"DEAR DR. ——:

"I have just finished reading, and reading carefully, your lecture containing an account of the great obstetrician of two centuries ago, De la Motte. It

is long since I have read a medical article which gave me so much satisfaction. I have always thought a good deal of wise 'country doctors,' and La Motte appears as one of the wisest and best, whose writings are well worth recalling in the midst of the swarms of medical authors who are crowding each other in the pursuit of fortune and fame."

Between the reception of the letter you published in THE MEDICAL AND SURGICAL REPORTER a short time since and this now given, several intervene—I never wrote to him that he did not kindly and promptly respond—but I doubt if any of them are of sufficient professional interest to be published in a medical journal.

The interview to which reference has been made occurred in 1878, the month September. A few minutes after my entrance into his house and the following brief conversation which I cannot now recall, he took me to one of the windows of the room where we were sitting, back room of second floor, and pointing across the Charles River, showed me the penitentiary, saying, "There is where we put our bad men," and "there," pointing to Harvard, "is where we take our good men and make doctors of them." Resuming our seats, he picked up a slim book, bound in red muslin, apparently fresh from the publishers, and said, "Here is a book of poems that has been sent me, and indeed it has some merit. Unfortunately in this age and in our country every young man or young woman who can make two lines, one ending in dove and the other in love, thinks that he or she is a poet. There are two diseases which I could never cure, hydrophobia and writing poetry."

Further on in the interview he remarked: "I have been to see old Dr. Jacob Bigelow this morning—I generally go to see him once a week—and as I was leaving him he said, 'Dr. Holmes, if you find any one happier than I am, please let me know.' And there he is, more than eighty years old, blind and bed-ridden, but he is happy." I ventured to ask Dr. Holmes, what is the secret of his happiness? He immediately replied, "What is the secret of all happiness? Temperament. If a person has good digestion, moderate desires and wants, and these are met, he will be happy." But, said I, not perfectly satisfied with this definition of happiness, what is to be done for those who have not good digestion, whose wants are not satisfied, desires not gratified? His reply came after a little hesitation and with a tone of sadness, "I suppose they will have to die."

About this time my dear friend, that noble man, Dr. Fordyce Barker, came in and one or two others with him, and the conversation flowed in various eddies, the new guests contributing much to it. Dr. Holmes, of course, was the chief speaker still. He referred to Moody and Joseph Cook and Phillips Brooks, the last of whom he greatly admired. He quoted the refusal of Mr. Brooks to ask a blessing at the table of a gentleman who avowed that there was not much at his meals, respect for his guest, not for the good Giver of all, being the motive for asking. He also quoted the remark of a Boston lady—this remark appears also, I believe, in one of Emerson's essays—"A well-dressed woman is in the enjoyment of a happiness that religion cannot give." A different kind of happiness indeed, but by no means the highest.

The two hours passed swiftly in the company of Dr. Holmes, but their brightness has not been dimmed by the lapse of twenty-six years. They were among the happiest of my life.

Didn't Choose Him.

Mother—To think that my little Ethel should have spoken so impertinently to papa to-day at dinner! She never hears me talk that way to him.

Ethel, stoutly—Well, you choosed him and I didn't.—*Brooklyn Life.*

"THE trouble with this world, Raggsy," said Walker, the tramp, "is just here. In Central America bananas grow wild, but there ain't no markit for 'em. Up here where there is a markit for 'em they don't grow wild. What nacher wants to do to help the workin'man is to have things grow wild where there's a markit for them things."—*Harper's Bazar.*

TOO MANY PEANUTS.—A New York woman died on Saturday of peritonitis, brought on by eating peanuts. During the week she ate several quarts and at the post-mortem examination a quart of undigested peanuts was found.

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SATURDAY, DECEMBER 15, 1894.

EDITORIAL.

CRIMINAL ABORTION.

Questions of obstetric morality and of the criminal responsibility of medical practitioners in cases of abortion are constantly receiving the attention of medical and legal writers.

With the advance of medical and anatomical knowledge the law reaches higher and juster ground in the matter of obstetric skill, and many old delusions are now swept away. Naturally many elements enter abortion cases and, therefore, not a little confusion and conflict in the decisions bearing upon them. It requires careful sifting of judicial rulings as applied to particular cases, each with its own peculiar incidents and elements, to get the sound law governing in all such cases. These cases stain many pages of court records.

The vicious idea is not yet entirely effete that there is no offense in destroying the embryo, or fœtus, before there is a manifest knowledge of life, before the mother can feel the muscular motions of life. This absurd notion is fully exploded in medicine, but it still lingers in the popular mind and doubtless leads to much crime.

Quickening is but a new manifestation of preëxisting life. The life of the fœtus, or embryo, immediately after conception is just as positive, physiologically, as at any subsequent period, and ante-quickening fœticide has been made penal by the statutory enactments of many of the States. A leading English case establishes the position, upon grounds logically and legally sound, that the child exists legally from and after conception.

The criminal attempt to destroy the fœtus at any time before birth is termed in law a miscarriage, varying in degree of offense and punishment, whether the attempt were before or after the child had quickened and according as declared by statute. The term miscarriage is in effect identical with the destruction of the fœtus.

The crime of attempting to produce the miscarriage of a pregnant woman is complete if the attempt is made at any time during pregnancy.

Much confusion arose from early judicial findings in some of the States to the effect that it never was a punishable offense at common law to produce, with

the consent of the mother, an abortion prior to the time when the mother became quick with child. It was not even murder, at common law, to take the life of the child at any period of gestation; even in the very act of delivery. To remedy this adjudged defect in the law, Massachusetts, New Jersey and other States passed remedial statutes.

The Supreme Court of Pennsylvania did not so interpret the common law. It says, in a strong and elaborate opinion: "The moment the womb is instinct with embryo life and gestation has begun, the crime may be perpetrated." And further, that "when a female is with child and a potion is administered to her for the purpose of destroying the child, which produces the death of the mother, it is murder in the second degree unless there existed in the perpetration of the mischief an intent to take away the life of the mother as well as to destroy the offspring, in which case it would be murder in the first degree."

That which has been laid down as very old English law gives strong support to this opinion. More than two hundred years ago Lord Hale, one of the purest, most honored and eminent of English jurists, interpreted the law as follows:

"If a woman be with child, and any one gives her a potion to destroy the child within her, and she takes it and it works so strong that it kills her, this is murder, for it was not to cure her of a disease, but to unlawfully destroy the child within her, and therefore he that gives a potion to this end must take the hazard, and if it kills the mother it is murder."

By the well settled and established doctrine of the common law, the civil rights of an infant *in ventre sa mère* are fully protected at all periods of gestation.

It may be concluded that any attempt to procure abortion, even when the pregnant woman is not quick with child, is a misdemeanor at common law, and when the mother is quick it is a felony.

Miscarriage, both in law and philology, means the bringing forth of the fœtus before it is perfectly formed and capable of living. The word abortion is synonymous with miscarriage in its primary meaning. It has a secondary meaning, in which it is used to denote the offspring. Any person who does any act calculated to prevent a child from being born alive is guilty of abortion.

It is not alone for the reasons that this offense is one against morals and decency, that it is in wanton disregard of moral and social duty, that the law so severely condemns it, but "because it interferes with and violates the mysteries of nature in that process by which the human race is propagated and continued. It is a crime against nature which obstructs the fountain of life and therefore it is punishsd. It is not the murder of a living child which constitutes the offense, but the destruction of gestation by wicked means and against nature."

The means by which abortions are procured are many. It is dangerous to the life and health of the mother and to the existence of the child to experiment with any drug, medicine or noxious thing to produce miscarriage. Ignorance may lead to the selection of something that will not produce the effect designed, but if it be noxious in any degree, though in the judgment of others who have greater knowledge it cannot produce the effect intended, it is criminal. If a person with a criminal intent use any substance to produce a miscarriage he will not be held innocent because he mistakenly administered a drug or substance which did not produce the result intended. It is the *intent* and not the *substance used* that determines the criminality. Guilt is not determined by the success or failure of the attempt, but the *measure of the punishment* is graduated by the fact whether the woman

lives or dies. The law, in its solicitude for the sacredness of human life and the personal safety of every human being, guards the health and life of the female against attempts to procure abortion.

The spirit of the law is forcibly declared in a Supreme Court decision interpreting the Massachusetts statute. It was held that it was not required to prove what the medicine was, or whether it would produce the effect intended, or whether it was actually taken by the woman, nor that the liquids and pills procured for her and which she was advised to take for the *purpose of producing* a miscarriage were noxious things. The reasoning of the Court is that it may well be that the Legislature has thought fit to punish persons for thus tampering with a woman's health and life, though they may be utterly mistaken as to the character and effect of the medicine; and if it were necessary to prove the quality of the medicine it might often be difficult to convict offenders who had used the most noxious drugs. The fact is well recognized in law, as it is in medicine, that the willful and unnecessary procurement of an abortion is an act highly dangerous to the mother, and generally fatal and frequently intended to be fatal to the child. If with gross ignorance of the subject any one, from the desire of gain, undertakes a case and in consequence death ensues, it is clearly a homicide, by no means either justifiable or excusable. The law admits of no doubt.

The question whether the physician is regularly educated or not does not apply. A regular medical education may furnish a defense which an uneducated person could not have. The only question is whether in point of fact the physician or operator was ignorant of what he was about, and whether that ignorance was the cause of death.

If a man with a most extensive practice were to take cognizance of a particular case of which by his treatment he showed that he was clearly ignorant, his great practice would not be any excuse. The law, though gold lined through by many of our Christian charities, does not, of late years, mitigate the severity of its penalties in these cases. It is recognized how exceeding great is the number of people easily persuaded to put confidence in the itinerant quack and to trust their lives to strangers without knowledge or experience, who yield to the impudent pretensions of ignorant empiricism; therefore the need of severe remedies.

Has there been that healthy growth of the moral sense of the profession and the community on this subject which we have a right to expect in communities setting up high claims to chastity, to all the social virtues, to Christian morality?

The words of Hugh L. Hodge would make profitable reading from a high moral standpoint for the women of our land. The facts are too well known to the medical profession for their ignoring. He says: "This low estimate of the importance of fœtal life is by no means restricted to the ignorant or to the lower classes of society. Educated, refined and fashionable women—yea, in many instances, women whose moral character is, in other respects, without reproach, mothers who are devoted with an ardent and self-denying affection to the children who already constitute their family—are perfectly indifferent respecting the fœtus in the uterus. They seem not to realize that the being within them is indeed *animate;* that it is, in verity, a human being, body and spirit; that it is of importance; that its value is inestimable, having reference to this world and to the next. Hence they in every way neglect its interests. They eat and drink, they walk and ride, they will practice no self-restraint, but will indulge in every caprice, every passion, utterly regardless of the unseen and unloved embryo. They act with as much indifference as if the living, intelligent and im-

mortal existence lodged within their organs were of no more value than the bread eaten or the common excretions of the system. Even in cases where mothers from repeated abortions, where fœtus after fœtus has perished through their neglect or carelessness, and when even their own health is involved in the issue, even in such cases every obstetrician can bear testimony to the great difficulty of inducing our wayward patients to forego certain qualifications, to practice certain self-denials, and to adopt efficient means for the salvation of the child. This is not all. We can bear testimony that in some instances the woman who has been well educated, who occupies a high station in society, whose influence over others is great and whose character has not been impugned, will deliberately resort to any and every means which may effectually destroy her unborn offspring. Ashamed or afraid to apply to the charlatan who sustains his existence by the price of blood, and dreading publicity, she boldly and wickedly adopts measures, however severe and dangerous, for the accomplishment of her unnatural and guilty purpose. She will make extra muscular efforts, by long fatiguing walks, by dancing, running, jumping, kept up as long as possible; she will swallow the most nauseous, irritating and poisonous of drugs, and in some instances she will actually arm herself with the surgeon's instrument and operate upon her own body, that she may be delivered of an embryo for which she has no desire and whose birth and appearance she dreads."

Horrible! "and pity 'tis, 'tis true."

ABSTRACTS.

LESSONS LEARNED FROM ONE HUNDRED ABDOMINAL SECTIONS.

F. BYRON ROBINSON, M.D.

1. That chloroform kills outright by affecting the heart or respiratory center.

2. That ether may be followed by bronchitis and nephritis (immediate or remote).

3. That opening the peritoneum produces a raging thirst which can be slaked by one-half to two ounces of hot fluid an hour. Ice is dangerous and cold water should not be used after abdominal section.

4. That saline purgatives are prophylactic against incipient peritonitis. General peritonitis once established is practically an incurable disease.

5. That it is infection that tends to destroy life, while peritonitis tends to save life by throwing out exudates to prevent the invasion of infection. Local peritonitis is nature's method of repair.

6. That the three great regions of peritonitis are: *a*, the pelvic; *b*, appendicular; *c*, the region of the gall bladder They resist the invasion of infection and tolerate it markedly.

7. That infection among the small intestines is very fatal, from inability to produce peritonitic exudates to circumscribe the infection.

8. That gonorrhœa is the cause and sustaining factor of the majority of persistent tuboovarian diseases or pelvic peritonitis.

9. That gonorrhœal appendages are apt to infect ligatures which may suppurate and produce a fistula from one month to one year after the operation.

10. That post-operative hernia of the abdominal wound is liable to occur in malignant or aged cases. That advanced malignant visceral diseases should not be molested.

11. That irrigation and drainage of the peritoneal cavity should be limited—irrigation quite limited and drainage to hemorrhage and pus cases.

12. That the Trendelenberg position enables one to do more perfect work by seeing with the eyes and giving wider space for manipulation.

13. That suppurating appendicitis can

be radically cured (for two years at least) by an incision close to the right iliac fossa, allowing the pus to escape and not searching for the appendix. The incision can profitably be made close to the iliac spine.

14. That in woman the appendix is in the pelvis in one-third of the cases and tuboövarian and appendicular disease may each be derived from the other.

15. That inguinal hernia can be radically cured by restoring the obliquity of the inguinal canal and removing the spermatic cord into a new canal (Marcy, Bassini and Halstead).

16. That femoral hernia can be radically cured by displacing the femoral vein and artery toward the iliac spine and suturing the lower border of Poupart's ligament to the pectineal fascia—making a new canal for the vein and artery (Fabricius).

17. That tying off the appendages and then ligating the uterine artery as it courses along the uterus as far down as the cervix: *a*, quickly stops menstruation; *b*, checks hemorrhage in the uterine myoma; *c*, atrophies uterine tumors by cutting off the blood stream; *d*, by ligating the whole broad ligament low down with locked stitches the retroverted uterus can be well elevated; and *e*, by ligating the nourishing nerves, atrophy of the genitals will ensue.

18. That the fimbriated end of the Fallopian tube closes in two ways during the course of disease: *a*, in one case (disastrous) the tubal fimbriæ are only partially turned back into the tubal lumen, leaving infected fimbriæ both in the tubal lumen and in the peritoneal cavity—such cases are constantly liable to recurrent infection and exacerbation because the mucal fimbriæ serve as a home for the germs; *b*, the other (favorable) method is where all the fimbriæ of the tube are turned back into the tubal lumen, where they lie coiled up like the petals of a rose.

19. The very severe forms of menstrual neurosis can be cured (for two years) by removing the uterine appendages close to the uterus. Bleeding myoma is also in some cases cured by the same process.

20. But in reoperating on abdominal cases (one ten months, the other fourteen, after) for parovarian cysts, the viscera are found surrounded by various degrees of adhesions. The fourteen months' case possessed dense and extensive adhesions. I proved the same fact on scores of dogs' viscera several years ago.

21. That parovarian cysts are the most liable to recur in 100 cases of abdominal section.

22. That abdominal fistula is apt to arise immediately after the operation and continue for some weeks to eighteen months. Also that some fistulæ arise from two to six months after the operation and continue for eighteen months.

23. That urea is the best standard for safe laparotomy, as far as regards the kidney. When the woman came to the hospital the urea varied from five grains to twelve grains to the ounce, but in a few days it would become about eight grains to the ounce. Not so much notice is paid to albumen or sugar.

24. That in ruptured ectopic pregnancy there is surgical hope, though the temperature is nearly 107 and the pulse 160.

25. Every case of abdominal section should be in bed at least three weeks.—*J. A. M. A.*

Pinning Him Down.

She—Why didn't you come around last night?

He—I didn't get through at the office until so late that I hadn't time to go home to dress, and I didn't like to call in my business suit.

She—Why not? Don't you mean business?—*Detroit Free Press.*

An Idea.

Bobbie—Papa, I've been reading a story about an elephant drawing up a lot of water and then squirting it all over a man he didn't like.

Bobbie's Father—That wasn't a very nice thing to do, was it?

Bobbie—No. I should think he would have made him check his trunk.—*Harper's Young People.*

"CAN you give me a little breakfast, ma'am?" pleaded the tramp. "I'm hungry and cold. I slept outdoors last night, and the rain came down in sheets." "You should have got in between the sheets," said the woman kindly as she motioned him to the gate.—*Boston Home Journal.*

SOCIETY REPORTS.

NEW YORK STATE ASSOCIATION OF RAILWAY SURGEONS.

On November 15th, at the New York Academy of Medicine, this association held its fourth annual meeting.

The attendance of members was large. In addition there were several well-known surgeons, not resident in New York City, as participants and invited guests. Among such may be mentioned: Dr. W. L. Estes, of South Bethlehem, Pa.; Prof. A. P. Grinnell, of Vermont; Prof. John B. Murdock, of Pittsburg, Pa., and Prof. J. S. Wight, of Brooklyn, N. Y.

The principal topic which engaged the attention of the association was the subject of amputation. As the title had it, "Shall we amputate or shall we wait?"

The president, Dr. M. Cavana, of Oneida, presented an address on "Important and Unsettled Questions in Railway Surgery."

Dr. W. L. Estes opened the special discussion by reading a highly interesting essay on amputation, taking the affirmative for early interference and primary amputations. By a rigid adherence to aseptic methods the mortality of amputations might be very greatly reduced, and the speaker gave the statistics of more than three hundred cases in his own practice with a mortality of but a fraction over four per cent. He would not amputate in deep shock, and showed by figures that during the past six years, since conservative methods were introduced, his mortality was diminished more than fifty per cent. He believed that when one was in good condition after a serious crush of a limb, if an amputation was to be performed there was no advantage in waiting. He would be guided generally by the condition of the patient in deciding whether to operate immediately or wait.

Dr. Murdock opened the discussion on Dr. Estes' essay by saying that he had come with a paper prepared to submit, but Dr. Estes had so accurately and fully expressed his views that he would forego reading it and say but a few words only. He was entirely in accord with what had been said with reference to conservation, and agreed that when a limb was badly crushed and the question of severance was raised, the time to amputate was at once, as the dangers of infection and hemorrhage more than counter-balanced whatever advantage might follow delay. He had no faith in that line of surgery which exposed the patient to prolonged sufferings and then left him with a useless joint or limb. He cited Dr. Packard, of Philadelphia, who had declared that the saving of one limb might embolden practitioners to depend on such conservative means as would cause the sacrifice of a hundred lives.

Dr. Wight commenced by declaring that the discussion of medico-legal questions had no place at a meeting of surgeons. He then defined what, in his opinion, constituted a surgeon, alleging that one might be a good surgeon and yet know something of medicine, but that one might be a thoroughly competent physician and yet a very indifferent surgeon.

Since the introduction of anæsthetics surgeons had overlooked the importance of time in all operations; this was particularly true of amputation. In those who had sustained amputation in consequence of accident, when their general condition was good there should be little or no mortality. He had always observed that shock was in proportion to the loss of blood and the time occupied in amputating. It was his practice when a badly mangled limb came under his care to quickly effect a severance of it rather than wait until inflammatory changes set in.

Dr. Grinnell acknowledged that he was a physician, occupying a higher branch of the healing art than surgery. He had much to do with railroad surgeons in his capacity as an official for several railroad companies.

He believed that on the whole surgery had but very slightly, if any, reduced the mortality of amputation since the time of Celsus; certainly there was little or no difference in mortality now and in the time of the late war, when he was enabled to participate in a large number of amputations. He would most certainly insist on the greatest conservatism being always observed and every effort tried before a limb should be consigned to the amputating knife.

Dr. Manley opened his side of the question by first presenting short reports on six cases of serious mangling lesions of the extremities, complicated by such internal

injuries that none survived more than thirty hours. All were from railroads and had come into his service in the hospital during the preceding month. Next he submitted a patient for examination who three weeks before had his right elbow joint torn widely open and the soft parts entensively damaged. He said he exhibited him in order to show what might be accomplished, even in the most desperate cases, when we understand how to utilize conservative measures. Then a number of cuts and photographs were exhibited, illustrating various grave types of traumatisms, in which all the extremities were saved.

In opening his address on "Conservatism as a Fundamental Factor in Amputation," he said that he approached the consideration of the side assigned to him with diffidence, because his views might seem revolutionary and radical, and besides, four speakers had preceded him on the opposite side. The subject was a large one; he had written at some length on it, but as the time was limited he would but submit a few postulates and request the attention of the members to but a few features of the question. In the beginning he would say that though Dr. Estes' paper abounded in the most remarkable contradictory and inconsistent statements, yet he regarded the body of it as the strongest support that could be given to the position he would himself take.

He would agree that it would be both cruel and almost criminal to amputate in the presence of serious internal complications or when a patient was in profound shock, but he would go a long way further and insist that in civil life primary amputations should be wholly discarded. Esmarch's indications for amputations under fire in war might perhaps be accepted, but they certainly have no place in time of peace, for it should not be forgotten that amputations are often undertaken for other purposes than to save life. In the vast majority of instances we utilize them simply to aid the processes of nature in separating dead from living tissues and favoring the formation of a useful stump.

Immediately after a limb is crushed it was quite beyond the power of any surgeon to determine with precision the exact point of the vital line, and therefore one might go too high and needlessly sacrifice healthy structure, or too low and be obliged later to do a consecutive amputation.

In all cases, unless the parts had been traumatically amputated, enough would be accomplished if we effected complete hæmostasis, thoroughly cleansed the parts, brought the limb into a comfortable position, applied appropriate dressings and then waited until we were able to see whether the damaged limb were but temporarily asphyxiated or totally devitalized, or until the demarcating line was evident.

Resection of bone and articulation had come to largely replace amputation in pathological conditions during the past twenty-five years, and with marvelous success. During the closing years of our late war, through its utilization it had come to quite generally displace amputation, so that in this manner thousands of limbs were spared which formerly were sacrificed.

Amputation, he declared, was very often performed altogether too precipitately. As it always entailed the irreparable loss of a limb, it should not be lightly undertaken and never without consultation. Our own reputation, our patient's well-being, and often corporate interests equally imposed on us the importance of never performing an amputation until all the aids of science had been faithfully tried; and the resources of art were to be exhausted before this last and extreme procedure was resorted to. He would emphasize it, too, that the rules and principles which should guide us in the performance of amputations for pathological conditions must be quite wholly ignored in traumatisms.

At the afternoon session Dr. F. A. Stillings, of Concord, N. H., read a paper on "Asepsis and Antisepsis in Surgical Work," and showed by a large number of observations that there was a less tendency to suppuration in wounds when rigid asepsis was employed.

"Special Features of Railway Surgery" was the title of a paper by Dr. C. B. Herrick, of Troy. The other two papers were by Drs. J. A. Van Duzen, of Syracuse, and R. S. Harnden, of Waverly, and were given specially to the consideration of railway surgery.

The officers elected for the ensuing year are: Dr. R. S. Harnden, of Waverly, president; Dr. C. B. Herrick, of Troy, vice-president; and Dr. J. F. Valentine, of Brooklyn, treasurer.

CURRENT LITERATURE REVIEWED.

IN CHARGE OF ELLISON J. MORRIS, M.D., AND SAMUEL M. WILSON, M.D.

THE ALIENIST AND NEUROLOGIST for October. Dr. John Harold reports a

Case of Myxœdema Successfully Treated by Thyroid Gland.

The patient was a man fifty-one years old, unable to recall any of the usual predisposing influences. His habits were temperate.

The patient first noticed a clumsiness in handling objects, that his feet were habitually cold, that he was growing stouter and weaker and therefore unfit for his customary hard work, and had for several years suffered from chilblains.

For three or four years his friends remarked the change in his appearance. When seen he had the swollen and expressionless face, thin and peculiarly arched eyebrows, wide nostrils with thickened alæ and flat nose of an advanced case of myxœdema

The hair of the scalp was scanty and dry; parts of the scalp were bald, the axillæ and pubic regions free from hair. The tongue was enlarged and moved slowly, the teeth loose, the gums spongy and receding. The skin was sallow, thickened, harsh and dry and free from any sebaceous secretion; the nails brittle and grooved. Hands and feet were enlarged but not spade-shaped.

Movement, thought and speech were slow, the voice was husky, and little interest was shown in the surrounding life.

Complaint was made of a bitter taste and disagreeable odors.

The thyroid gland could not be outlined. The urine was pale and free from sugar and albumen. There was sensitiveness to cold, but nothing else abnormal could be found.

The average temperature of the body was 97.8°.

A glycerine thyroid extract was used hypodermically and then stopped on account of the pain and abscesses resulting. Five-grain tabloids of extract were then given by the mouth, and improvement soon began and all the symptoms abated.

By keeping the patient in bed he is completely under control, and the unpleasant effects which sometimes arise from thyroid treatment are readily noted and easily relieved.

The symptoms of over-use of this drug are palpitation, neuralgic pains, giddiness, nausea, headache, attacks like angina, etc. If the patient have any cardiac derangement the commencing doses must be small.

Other papers in this issue are: "Hallucinations and Delusions," by Dr. Wm. M. McLaury; "Uranism and Pæderasty," by Dr. Dimitry Stefanowsky; "Psychiatry and Brain Localization," by Dr. Arthur E. Mink; "The Origin and Progress of Mental Medicine," by Dr. E. Regis.

Continuous General Psycho-Motor Paresis,

by Dr. C. H. Hughes.

The author has seen several cases of psycho motor paresis which were neither precursors of general paresis nor results of general neurasthenia or cerebrasthenia. One is reported as follows: A slender man, sixty years old, with a doubtful history of syphilis, appeared stuporous and inert. Speech was hesitating, somewhat scanning, and the conversation was mainly carried on through his wife. His skin was moderately active, bowels rather constipated, urine alkaline with phosphates usually in excess, no albumen nor sugar, sp. gr. 1020. The pupillary reflex was slow, but equal in both eyes; all other reflexes were weak, slow or absent. Every action, mental or physical, was unusually slow.

No physical signs of any disease could be detected, and the diagnosis would have been promptly made of acute dementia or atonic melancholia, but no delusions of any kind were present.

The patient was given quinine and a general syphilitic and neurasthenic course of treatment, and recovered sufficiently to be able to resume charge of his business in six months.

There were no symptoms of progressive paresis, and the diagnosis of syphilis could not be confirmed. The author thinks this case belongs to a separate class of which it is a type.

Precautions Necessary in the Use of Pessaries.

Neugerbaner has collected 282 cases in which pessaries have been the cause of more or less grave lesions of the genital organs, including 23 perforations of the bladder, 20 of the rectum, 1 of both the bladder and rectum, 2 of the *cul-de-sac* of Douglas, 3 of penetration of the pessary into the pelvic connective tissue, 6 into the uterine cavity, 4 of introduction of the pessary into the bladder through a fistula, and a very large number of cases of para and peri metritis and even peritonitis and septicæmia, including 8 fatal cases, 8 cases of carcinoma of the vagina, and many cases of incarceration in which the pessary could be extracted only by surgical means.

In spite of this long and varied list of accidents the author by no means rejects the pessary from the gynecological armamentarium, but does insist that when the use of a pessary is decided upon great care shall be taken as to its form, size and the substance from which it is made, and that furthermore the patient shall subsequently be under the control of the physician. Neugerbaner himself generally uses globular or ovoid pessaries.

The author lays great stress on the point that the patient should exactly understand how to withdraw the pessary at night and insert it in the morning herself, and in cases of pessaries used for retro displacements the patient should be taught to withdraw the pessary herself on feeling the slightest pain from its presence, and not to be forced to wait until her physician can do it for her.—*Ex.*

PERISCOPE.

IN CHARGE OF WM. E. PARKE, A.M., M.D.

MEDICINE.

A Clinical Study of the Effects of Inhalations of Chloroform and Ether Upon the Kidney.

Wunderlich (*Cent. f. Chir.*) has examined the urine of 100 cases of ether and chloroform narcosis. The urine was carefully examined before and after, both microscopically and chemically. The investigations give the following results:

1. In those cases in which albumin is already present the amount of albumin is markedly increased—that is, when ether is the anesthetic used.

2. Albumin is frequently seen after inhalations of chloroform and seldom when ether is used. The albuminuria usually disappears in from twenty-four to forty-eight hours.

3. When chloroform is used casts are frequently found in the urine, but seldom after ether. The course of the albumin and casts is, in the author's estimation, an ischemia of the kidney or an increase in the blood-pressure.

The author, in conclusion, says the so-called "ether nephritis" may be excluded from medical literature.

Fatal Peritonitis Following Orchitis Due to Mumps.

M. Hornus publishes the report of a case of double orchitis occurring in a soldier aged twenty-two during an epidemic of mumps. It was not due to gonorrhœa and there was no venereal infection. It came on with a few colic-like pains, followed by frequent movements of the bowels. Both testicles were equally affected. The temperature was 103.1° F. On the second day the patient developed peritonitis, of which he died in forty-eight hours. The autopsy showed that the testicles were transformed into collections of pus, with no trace of seminiferous tubules. The spermatic cords were bathed with pus, which continued beyond the inguinal canal. The intestinal coils were covered with purulent and fibrinous deposits. The remaining organs were normal.—*Gaz. hebd. de med. et de chir.*

Dangers of Internal Antiseptic Medication.

P. Dignat (*Jour. de Medecin de Paris*), in a timely article, writes of the dangers accruing from the internal administration of antiseptic remedies. He describes in detail two cases in which the ingestion, respectively, of salol and guaiacol, in comparatively feeble doses, produced a series of untoward symptoms. After a careful observation and study, these symptoms could only be ascribed to the action of the remedies alluded to. The author believes that antiseptic internal medication renders good service, but insists that the fact that such medication is apt to do more harm than good in many instances should not be lost sight of in modern therapeutics.

The Diuretic Action of Calomel.

Sklodowsky (*Deutsch. Archiv f. Klin. Med.*) affirms that as a diuretic calomel acts in renal disease better than in cardiac troubles. In seven out of fourteen cases of well-defined Bright's disease, accompanied with œdema, calomel was found superior to all other diuretics recommended to-day. In summing up his experience, the author believes that calomel acts as a powerful diuretic, facilitating the disappearance of œdema in kidney disease, with the important advantage that the drug does not produce noxious effects at all on the renal tissue. He believes that calomel ought to be tried where other diuretics have failed to act.

Chronic Constipation in Children.

Dr. Starr (*Hospitals-Tidende*), in the chronic constipation of children, a disease which is quite frequent, and where the ordinary remedies usually fail, has found the following suppositories of service:

Extr. belladonna.....	o	03	gr. ss
Aloes.....	o	60	grs. ix
Cacao butter.....	6	o	ʒjss

One or two a day, introduced in the rectum.

Pruritus of the Vulva.

Dr. Thomas More-Madden says in the *Medical Times and Hospital Gazette:* "Of the local sedatives that may be employed, none is more generally serviceable than a solution of methylene blue (which may also be given internally in pill form as a useful analgesic)."

For the same trouble the following formula is given by the *Medical Chronicle:*

Water.....	450.00 grms.
Alcohol.....	50.00 grms.
Mercuric chloride.....	1.00 grm.
Indigo-carmine.....	.05 grm.

M. Use as a lotion.

What Next?

"Vaccination" against diphtheria, as we suppose the process must be called until a name for it is invented, is now an accomplished fact, and the horse, it seems, is to be,

like the cow in relation to small-pox, the intermediary and modifier. See the wonderful wisdom of Providence: nothing is lost, nothing wasted. When tallow began to get scarce and dear coal oil was discovered. As timber in the older States thinned out and rails were rails, the barbed wire solved the fence problem. When the electric motor emancipated the horse and the patient mule from the street-car service, what to do with the horse became a problem, which the French solved by eating him. Behold! science has dedicated the emancipated animal to nobler uses and he is not yet *hors du combat;* he is to be used to knock out diphtheria —a kind of *equine*-knocks, eh?—*Ex.*

Clean Thermometers.

Those who are constantly preaching the germ causes of disease are the very fellows who many times are equally as careless as their unbelieving friends. How frequently do we see physicians take the temperature of their patients, regardless of the existing disease, wipe the instrument with their handkerchief, which is the most liable linen to be full of germs, or a towel or even use the sheet, and carefully place it away in a case preparde with a small amount of absorbent cotton in the bottom to keep from breaking, and unintentionally preserving the germs from time to time, to be conveyed to the next unfortunate, who may be the first patient called upon. This seems to be a very simple thing to discuss, but any reasonable person can readily see the necessity of having his thermometer thoroughly cleaned every time it is used. It should be washed with soap and water, and if any cotton is used in the bottom of your case let it be sublimated cotton and occasionally renew it.—*Charlotte Med. Jour.*

Syphilis.

M. Jullien states that a 25 per cent. mixture of calomel in liquor guttæ perchæ may be utilized in the treatment of syphilis, painting it upon a greater or less extent of skin three times a week. The mercury is absorbed, and this method is useful when the stomach is intolerant.—*La Tribune Medicale.*

Borax as an Aid to the Digestion of Milk.

Germaine See has recently announced the clinical fact that borax used internally is a valuable aid to the digestion of milk. He discards the use of carminatives, charcoal and other intestinal antiseptics, claiming that they injure the mucous membrane of the intestines. He employs laxatives—hydrastis canadensis, castor oil and olive oil—in large doses or oil enemata. Prof. See holds that in many cases of indigestion the stomach is erroneously treated when the real cause of the disease are the intestines, which are often the seat of membranous enteritis resulting from constipation, and giving rise to glary, mucilaginous, cylindrical masses of mucus, with pain and swelling over the region of the colon. These symptoms easily distinguished the cases referred to from ordinary constipation, in which there may be clearly seen masses of filamentous or vermicelli-like mucus.—*Modern Med.*

Blood-Letting in Eclampsia.

The *British Medical Journal*, in commenting upon Tarnier's recommendation of blood-letting in eclampsia, suggests that the simple withdrawal of a small amount of poisonous blood does not necessarily diminish the poisonous properties of the blood which remains; and since it is now well established that the symptoms of eclampsia are due to toxæmia, or general poisoning of the blood, it is evident that the most rational thing to be done is to diminish the amount of poison in the blood. How may this be done? A practical method has been the adoption of a milk diet for some weeks prior to the confinement. By this means the blood will be largely diluted; and if the eclampsia appears without premonitory symptoms, the blood may be diluted by making the patient drink copiously of water, by means of large salt-water enemata, and in extreme cases even by subcutaneous injection of a normal saline solution. The blood may be washed by adding to this such eliminative measures as will subtract the watery portion of the blood—as vigorous perspiration, purgation by means of the salines or even croton oil in extreme cases, and increase of kidney activity.

Elimination through the skin is the best of all the measures mentioned, through the bowels ranks next in value, and by way of the kidneys least available, owing to the fact that about the only way in which kidney activity can be stimulated directly, except by diluting the blood and thus increasing the blood pressure, is by means of diuretics which are in themselves more or less toxic. Faradism applied over the region of the kidneys and the solar plexus or abdominal sympathetic ganglia is a valuable means of stimulating renal activity. Blood-letting will probably seldom be required in eclampsia when the measures mentioned can be made available. A decided objection to blood-letting is the fact that not infrequently eclampsia occurs in patients who are already anæmic and exhausted by prolonged labor, so that a depletion of the blood is decidedly undesirable. One is never certain also, in cases of this sort, that the labor itself may not be followed by profuse hemorrhage, which, added to the depletion already effected by the blood-letting, might be fatal in its consequences, though insufficient to cause death by itself.

Acetanilide for Vomiting.

Among the many uses to which acetanilide has been put other than that of an analgesic, we desire to call attention to its employment in the treatment of obstinate vomiting, particularly when that vomiting seems to be due chiefly to nervous disturbance or marked

gastric irritability. In the treatment of the vomiting following operations acetanilide is particularly useful, and the administration of two grains every hour until six grains are taken will often prevent this unpleasant sequel of operative interference. We have used acetanilide for this purpose a number of times with very satisfactory results, our attention having first been called to it by Dr. Brown, of Sioux Falls, S. D., who told us that it was his custom in country practice to leave acetanilide with the nurse after the operation, with instructions to administer the drug should vomiting after recovery from the anæsthetic be an annoying symptom.

Whether it is of value in the treatment of the vomiting of pregnancy we do not know, but we would suggest its further trial. Probably the best way to administer it is to place the powdered drug in a little brandy, and then to add to a spoon some ice which has been finely pulverized. In this way we not only get the stimulating and antiemetic powers of the brandy, but we aid in the solution and therefore in the rapid absorption of the acetanilide. It is possible that the drug exercises its antiemetic effects chiefly by its influence upon the stomach itself, but we are inclined to think that the benefit is derived not only from this, but also from its influence on the nervous system after it is absorbed.—*Ther. Gaz.*

Treatment of Puerperal Eclampsia.

Dr. A. Charpentier (*Arch. de Soc. et de Gyn.*) gives a very extensive statistical review of the different methods of treating puerperal eclampsia in the various maternities of Paris and the method known as Duhrssen's. He arraigns the latter in very forcible language, characterizing it as brutal and unjustifiable. He sums up as follows:

1. Every pregnant woman with albuminuria being exposed to eclampsia should be put on an exclusively milk diet. This form of treatment serves as the best prophylactic of eclampsia.

2. Whenever one is called to a case of eclampsia and he finds that the patient is strong and vigorous and very much cyanosed, he should begin by withdrawing from four to five hundred grammes of blood by a venesection and then administer chloral either by mouth or *per rectum* as described in the text.

3 If the woman is delicate and the cyanosis but slight he should limit himself to the chloral medication.

4. Wait for the labor to come on spontaneously and do not interfere with the natural delivery whenever this course is possible.

5. If labor has set in spontaneously and delivery has not taken place on account of feeble uterine contractions, terminate labor by application of forceps or version if the child be living or by craniotomy if the child be dead.

6. Delay interference until the maternal parts are in a condition to render interference free from danger to the mother.

7. Reserve *accouchement provoque* for exceptional cases or when medical treatment has completety failed.

8. Reject absolutely Cæsarean section or *accouchement force* by deep incisions of the cervix, so to speak "the bloody method."

Medical Observations Among the Eskimos.

Dr. Frederick A. Cook (New York *Jour. of Gyn. and Obst.*), who was with Peary in North Greenland, observes that between the 74th and 79th parallels the Eskimos live on an absolute meat diet. Two-thirds of this meat is eaten raw and frozen and about one-third is cooked. For about ten months in the year they melt snow and ice for drinking-water; they use no salt or any condiment, nor do they ever bathe. They are fat and round, and the least excitement will cause blood to flow from their mucous membranes and a slight cut will bleed for an hour or two. The girls marry at twelve or fourteen and the men about ten years later, although girls do not menstruate until nineteen or twenty. Deaths in childbirth are not uncommon. During the whole of the long arctic night their secretions and passions are diminished and depressed, resulting in great muscular debility. Their women do not usually menstruate during this period, and the race are only passionate periodically—this period being that of the sun's return—when they fairly tremble with passion's intensity. During this period they have their courtship, and the few weeks of the sun's stay are mostly taken up in the active and most assiduous worship of Venus. Lactation lasts for from four to six years. Among the northern tribes there exist rheumatism and amygdalitis of the follicular type, also mild forms of the grip. Further south 50 per cent. have phthisis and the grip carries away its thousands.

The Treatment of Dysmenorrhœa.

Dr. Schwarze speaks with emphasis against the use of narcotics. Virburnum prunifolium, fluid extract, in teaspoonful doses thrice daily for from five to seven days before and continued during the menstruation, gives excellent results without unpleasant after-effects. It is not so successful if an inflammatory condition is associated with this symptom. He has noted also its value in arresting threatened abortion, even after the dilatation of the os uteri has been established. In many cases local massage is of great value, but it should only be employed in those which are not erotic. The use of a uterine sound before menstruation is followed by relief, and of still more value is dilatation of the entire cervical and uterine canal. Electricity —galvanic current, aluminium negative pole in the uterus, large positive pole upon the abdomen, current of from fifty to sixty milliamperes—has been of service in many cases. Castration is not indicated from the standpoint of the gynecologist alone, but only after consultation with the neurologist and alienist.—*Ther. Monat.*

SURGERY.

Imperforate Anus.

Henry Strachan, of Kingston, Jamaica, reports the following interesting case, which was under his care in the Kingston Hospital (*Brit. Med. Jour.*):

J. B., aged nine months, had never passed a stool, but the mother had noticed that fluid fecal material in small quantity passed away from the "front passage." There was never any "back passage." The infant had only begun to suffer during the past two or three weeks.

It was found that there was an imperforate anus. Deep pressure did not define the rectum, but a fistulous canal, just large enough to admit the passage of a small director, led from the fourchette, upward and backward, to what was evidently the blind end of the rectum. The abdomen was distended and evidently tender, but the general condition was not grave. I decided to operate from the anal site.

An incision was made in the pigmented spot of skin which occupied the usual position of an anus, and a careful dissection reached the end of the rectum, which was about an inch from the skin surface, without opening the peritoneal cavity. The gut was incised with scissors and the wall of the rectum brought down and stitched to the skin. An enormous evacuation of solid and semi-solid feces followed. The child made a rapid and perfect recovery.

The case is interesting as showing how long an infant could exist passing only a little fluid feces daily through a fistulous passage about the size of a crow-quill. It was only when the accumulation of gradually solidifying fecal matter began to extend the abdomen that any symptoms of obstruction manifested themselves, and this not until the child was nine months old. The rapid and complete recovery is satisfactory, for the mortality following this operation is usually high. Perhaps the greater age and development of the child at the time of operation placed it in a better situation for recovery than obtains in infants operated on when only a few hours or days old.

Dangers of Bicycling.

At a recent meeting of the Paris Academy of Medicine M. Hallopeau read a criticism on the article by M. L. H. Petit in which he reported three cases of sudden death from heart disease while bicycling. The opinion held by M. Petit that the exercise is contraindicated in old men and in persons with cardiac disease seems to M. Hallopeau to be exaggerated. He thinks that similar accidents, or those due to the bicycle alone, are so unusual that they are of secondary importance. In lung diseases he considers bicycling a useful respiratory gymnastics which increases notably the amplitude of the respiratory movements. His report terminated with conclusions which, after slight modifications, were adopted by the Academy, as follows: 1. The Academy recommends all persons who desire to indulge in bicycling to submit at once to a medical examination. 2. In experienced persons in good health the moderate use of this machine does not affect the cardiac functions. 3. The efforts made either when first learning to ride or with too rapid riding or by ascending of hills are, perhaps, to be looked upon as dangerous. 4. It is chiefly for heart and lung diseases that interdiction is perhaps absolute. 5. The Academy desires to receive articles from physicians throwing light upon this question.—*Gaz. des Hopitaux.*

Antiseptic Treatment of Gonorrhœa.

The great endeavor in modern therapeutics is to treat disease antiseptically. Gonorrhœa is a disease which in some cases will yield to any treatment and in other cases to none. It may occur from early childhood to late in life, and the first attack is usually the severest. It is a highly contagious disease and is usually self-limited.

The treatment varies very widely in different hands. Dr. Edward Pendleton advocates in the *International Medical Journal* this antiseptic treatment. After preliminary directions as to the methods of injecting the fluid, he says the penis should be washed in warm water and in a warm carbolic-acid solution (1 to 30), then a simple injection of water should follow. After the injection has been used for six days the following is recommended:

Acid. borici	ʒ ij
Tinct. iodi	ʒ ij
Glycerini	ʒ j
Aquæ	q. s. ad ʒ iv

M. Sig.: Inject three times daily.

If there is no discharge for ten days after the last pus is seen the patient may be considered well.

Vaccination.

Wm. N. Swift, of New Bedford, in discussing the technique of vaccination, lays down the following rules: Except in epidemics of small-pox, children should only be vaccinated when in good health. Cutaneous eruptions of all kinds are a contraindication. Vaccination should be done with the same care as any minor surgical operation. The skin should be carefully washed with soap and water. The vaccine lymph must be fresh, certainly not more than one week old. The virus should be inserted at more than one point. The point of inoculation should be kept perfectly clean throughout the whole course of the disease and protected from friction. The patient, meanwhile, should be considered as suffering from a mild disease.

As regards the improvement possible in this country, Samuel W. Abbott, of Wakefield, Mass., proposes the adoption of the

following general and special measures: 1. Cultivation and production of vaccine lymph by the United States Government for the use of the army, the navy and the marine-hospital service, and for all public institutions managed by the Government. Each State should produce its own lymph for the use of its public institutions and for the use of all local boards of health of cities and towns. 2. The abolition of agents and middlemen and the issuing of lymph directly from the producers to the parties who use it, every package to be stamped with the date of its collection. 3. The employment of better and more uniform methods of inoculating animals. 4. The exclusive use of animals less than one year old. 5. Limiting the time of collecting of lymph to a period of five days, or at the outside to six days, from the date of its insertion. 6. The adoption of careful rules for every establishment relative to cleanliness, the care of animals, etc. 7. If adult animals are used, a requirement that they shall be slaughtered before the lymph is issued.—*Boston Med. and Surg. Jour.*

Chronic Inflammation of the Seminal Vesicles.

Chronic inflammation of the seminal vesicles is not always easy to make out, as it has symptoms like inflammations of the urethra. Allen, in the *Medical News*, says that there may be a chronic urethral discharge with shreds in the urine or there may be vesical irritability with frequent micturition. In many cases there is some disturbance of the sexual function. In considering this subject the author offers the following suggestions:

1. The fluid in a distended vesicle, subjected to pressure, would escape at the point of least resistance, which would be the natural outlet, no matter how tortuous, unless the wall of the vesicle were ruptured by violence. Simple pressure on such a blind sac would seem better than an attempt to strip the vesicle down toward the duct.

2 The slow and unsatisfactory progress of a few cases may be due to the difficulty of emptying such portions of the vesicle which may in these cases be the chief seat of disease.

3. In some cases the ampulla of the vas deferens may alone be affected, when the stripping process would be easy and effective.

4. Disease of the vas deferens may possibly be of more importance than that of the vesicle itself, obstructing as it does the direct road from the testicle.

5. Simple massage of the vesicles may play an important part in the treatment.

Fixation in the Treatment of Fractures into Joints.

A paper with the above title was read before the American Orthopædic Association by Ansel G. Cook, M.D., of Hartford, Conn. (*Internat. Jour. of Surg.*), from which the following quotations are made:

All text-books on surgery that I have been able to consult assert or tacitly admit that fixation of an injured joint produces ankylosis. The same books also teach that broken bones should be set and kept in place till firm bony union has resulted. The question of passive motion is therefore a most difficult one to decide. If the surgeon moves the joint he disarranges the fragments of broken bone and hinders union; if he fails to make passive motion the joint becomes ankylosed.

Hamilton says passive motion should be inflicted as early as the seventh day after the injury; while Bryant says it should not begin until the end of the third or fourth week.

Conclusions and Rules of Treatment.—1. The bony or fibrous ankylosis is the result of injury and subsequent inflammation and not of immobilization.

2. That early passive motion only disarranges the fragments of bone, thereby increasing the production of callus; that it irritates the injured ligaments, and by increasing the inflammation tends to produce the ankylosis it is sought to prevent.

3. Immobilization is useful only when active inflammation is present or the ruptured ligaments and broken bones have united.

4. The logical treatment of a fracture into a joint, therefore, should be rest and local applications to reduce inflammation. Reduction of the fracture as early as possible, then immobilization until the bones and ligaments have united (from three to eight weeks or more, according to circumstances).

5. Passive motion and massage and use till the tissues become normal, or if the massage fails complete rupture of all adhesions under an anesthetic. The factors which will ultimately determine ankylosis are the nature of the original injury, the character and duration of the subsequent inflammation, the destruction of bone and cartilage, cicatricial contractions of the soft tissues around the joint, and the age and condition of the patient.

Abortive Treatment of Gonorrhœa by Permanganate of Potash.

Large injections of permanganate of potash methodically used is the best method of treatment yet introduced. Its advantages are: being absolutely painless in cases of anterior urethritis and scarcely painful in cases of inflammation of the whole tract; it can be commenced or left off without inconvenience; it has no detrimental action on the mucous membrane, but suppresses every trace of discharge from the first lavage, and is successful about eleven times out of fifteen. The size of the injection, its frequency and strength, must be adapted to individual cases. Generally strengths of 1 to 4,000, or 1 to 2,000, or even 1 to 1,000 are tolerated.—*Times and Register.*

Replantation.

The operation consists in replacing in its socket a tooth which has been partially or completely dislocated. The union after replantation is brought about through the periodontal membrane. In cases where the tooth is living and immediately replaced, a re-establishment of the vitality of the pulp is

sometimes produced. Magitot, who has recorded a large number of cases of replantation, maintains that, for success, there must be a complete ring of healthy membrane on the tooth. Results depend upon the nature of the conditions for which the operation is undertaken. If for traumatism and the tooth is immediately replaced, a permanent result may be looked for; but, on the other hand, if replacement is delayed the prognosis is naturally not so good.

Harrison (*Quart. Med. Jour.*) has had four such cases, and reports in detail an interesting case illustrating the above statements.

Influence of Sea Baths on Menstruation.

M. Houzel stated that most authors are in accord in the opinion that baths are contraindicated during the menstrual period. This opinion may be correct as regards the women of towns, but his personal observation has shown him that the robust and perfectly natural woman is not in a condition bordering on illness during this period (*Univ. Med. Mag.*). With her menstruation is a purely physiological act, silently accomplished and accommodating itself to the fatigues and vicissitudes which the necessities of life impose upon her. Sea baths, far from deranging, favor menstruation, prolong the period of sexual activity and increase her fruitfulness. He has frequently been surprised to see the fisherwomen, poorly nourished, slightly clad, feet and limbs bare, wade into the sea up to the waist, and sometimes up to the armpits, remaining there for hours. In spring and summer, having filled their nets with shell-fish, they come out of the water, and with their wet clothing and the dripping net on their shoulder traverse the town selling their fish. In the winter they may be seen, in coldest weather, with a heavy basket of mussels on their backs, from which the icy water constantly drops. Sometimes their clothes are completely frozen during menstruation, yet without causing any ill effects whatever. All this may seem surprising and may by many be attributed to race and habit, but a study of sea baths and their effect on the uterus easily explains it, and shows that all women, except those with grave lesions of the appendages, might imitate these fisherwomen to great advantage, provided they allow themselves time to receive the benefit of the sea air and to become accustomed to sea baths before going into the water during the menstrual period. Of 123 fisherwomen examined by Dr. Houzel puberty occurred on an average at the age of thirteen years and ten months, and the menopause at forty-nine years and six months—a difference in their favor, as regards the period of fecundity, of three years and seven months over women not going into the sea. According to Raciborski (" *Traite de la menstruation*," pp. 200, 248, *et seq.*) the average period of sexual life of the Parisian woman is thirty-one years and seven months.

Hæmatoma of Ovary.

Dr. Rohe does not agree with the view that this condition is due to excessive hemorrhage into the Graafian follicle after rupture and escape of the ovule. Sometimes hæmatoma exists when no rupture has taken place, and the corpora lutea frequently contain no blood. He thinks the view more rational that hæmatoma of the ovary is always to be regarded as a pathological formation having no connection with ovulation. He doubts whether any good purpose is served by the so-called "conservative" surgery, which consists in extirpating the hæmatoma, stitching up the wound in the ovary and dropping the organ back into the pelvis. Cases coming under his own observation have always presented either adhesions or displacements of the ovaries, and there are recognized indications for removal of the organs. Cites Dr. B. F. Black, "a careful and conservative gynecologist," in support of his views that ovaries affected with hæmatoma should be removed.

While admitting that the corpus luteum is an undoubted endothelial structure, Dr. Rohe thinks the statement of Dr. Foerster (*Am. Jour. Obst.*) that "what was previously called a corpus luteum is invariably an endothelioma" is open to grave doubt. Then he quotes Dr. Foerster's statement as to the connection of the corpora lutea with the production of hæmatoma. In his own view, hæmatoma is probably due to some nutritional change in the ovary or its blood-vessels, but what such change may be due to he leaves to the pathologists to determine.

Dr. Rohe goes on to describe a case which he thinks shows that there is no essential difference between so-called ovarian apoplexy, where the entire ovary is converted into a blood-cyst, varying in size from a billiard-ball to a fetal head, and those cases which present small collections of blood in the ovarian follicles and minute extravasations in the ovarian stroma.

An ovarian hæmatoma may rupture and give rise to pelvic hæmatocele; or bleeding may continue and patient die of hemorrhage. Peritonitis or sepsis is the most serious danger following rupture.

The diagnosis cannot be definitely made out before abdominal section, and the only rational proceeding is removal of the affected organ.—*George H. Rohe, M.D., in Amer. Jour. Obst.*

OBSTETRICS.

Intra-Uterine Injections in Antiquity.

At a recent meeting of an Edinburgh medical society Dr. Ballantyne quoted from a paper by Dr. Koromilas, a Greek physician, in which it was claimed that there was evidence in the writings of Hippocrates, Oribasius, Paulus Ægineta and Galen to show that these authors were acquainted with the use of intra-uterine injections. Hippocrates divided the degenerative organs into three parts—first, the external genitals; second, the genital organ or vagina; third, the uterus. He also used for each a special kind of substance to be injected; wine with honey for the external genitals, goose-grease for the vagina and oil with honey for the uterus. Dr. Koromilas believed that Hippocrates was the first to make intra-uterine injections.—*Med. Rec.*

Symphyseotomy.

The conclusions of Morisani, who has tested the operation perseveringly during twenty-eight years, were given at the recent congress in Rome and are of interest. He believes that clinical experience has fully justified the operation, and gives the limits of pelvic contraction in which it is indicated as 6.7 centimeters to 8.8 centimeters. The fetus should be alive and the operation performed at term, with dilatation advanced. At the present time he does not favor a combination of premature labor with symphyseotomy. The interpubic cartilage may be divided from below upward or from above downward, provided the subpubic ligament is surely divided. The subsequent use of forceps is useful, but not indispensable. To secure union in the joint it is sufficient to suture the soft parts and fix the pelvic bones with a bandage. He thinks the operation should only be compared with and is preferable to embryotomy when the fetus is alive, and predicts that it will take the place of the relative Cæsarean section. The supposed advantages of induced labor at the beginning of the ninth month over symphyseotomy at term are debatable. Ischio-pubiotomy, as done by its inventor, Farabeuf, differs from the pubiotomy of Aitkin and Galbiatti, and is a valuable operation in Naegle's obliquely contracted pelvis.

The alleged disastrous results of symphyseotomy are to be explained by the operation having been performed below the limit of its indication or at the wrong period of labor, by an improper manner of operating, by previous lesions of the genitals, or by special conditions of the patient. The death of the fetus must be attributed to too-long-delayed intervention, to faulty methods of extraction, or to accidental circumstadces.—*Internat. Med. Jour.*

Self-Infection in Childbed.

F. Ahlfeld, in a paper published in the *Zeit. f Geb. und Gyn.*, reaches the following conclusions:

1. The occurrence of fever in childbed, originating without previous examination, cannot longer be doubted.

2. The fevers for the most part are unimportant, though severe and even fatal cases are probable.

3. In well-conducted institutions the number of fever cases resulting from self-infection in childbed is larger than those caused by infection from without. The latter, however, are usually of a severer type.

4. The percentage of morbidity and mortality in an institution in which due care is taken to prevent infection from without depends on separating the primiparæ from the multiparæ and on the number of operative cases.

5. Preliminary disinfection of the birth canal is an important prophylactic measure.

6. Sublimate remains the best disinfectant.

7. The seat of infection is generally not the external genitals, but rather the cervix and endometrium.

8. Most fever cases in childbed are to be considered as resorption fever. They result principally from retention of the infectious childbed secretions.

9. The seat of the most active absorption is the uterine mucosa; next, that of the vagina.

10. The poison taken up is, as a rule, promptly eliminated—probably through the urine.

11. Pathogenic micro-organisms are always to be found in the vagina. They need only a favorable culture medium to develop their activity. This they find in the decomposing contents of the vagina and uterus after labor.

Danger of Intra-Uterine Injections of Glycerin for the Induction of Abortion.

Von Pfannenstiel (*Cent. f. Gynæk.*) says the results were such as to warrant a warning against further employment of the medium.

In the first case the woman succumbed to a nephritis from which she was suffering. In the bladder bloody urine was found, which condition was not present during life.

In the second case slight insensibility, cyanosis, fever to 39° C. and bloody staining of the urine, which was previously normal, occurred within an hour after the glycerin injection. The urine soon returned to normal. The microscopic examination showed hæmoglobinuria.

It is strange that other observers have never noted such an occurrence. But the second accurately studied and uncomplicated case speaks more than many positive cases. Hence this method must be forsaken.

GYNECOLOGY.

Senile Endometritis.

A. J. C. Skene (*Amer. Jour. of Obs.*) considers this condition quite different from the endometritis of early life. While in some cases it probably is a continuation of an inflammation which existed prior to the menopause, it is not so in the majority of cases. The disease may be limited to the cervical canal, but usually it includes the entire mucosa. It is as a rule suppurative, the discharge being sero-purulent, and when it begins as a catarrh it generally progresses to the suppurative form. The epithelium of the endometrium becomes almost entirely lost; granulations of low vitality spring up; minute extravasations of blood are seen with small pigment spots; atrophy of the muscular tissue was present and caused inversion of the mucous membrane; laceration of the cervix frequently existed; stenosis of the internal or external os was often present; pus would be discharged and again accumulate. When the disease had existed long enough to destroy the mucous membrane it might end in cicatrization, but it could scarcely be called self-limiting. Displacement, laceration of cervix, and a continuance of endometritis existing from early life are some of the causes of this attribute. Inattention to clean-

liness, also fibroma, may cause it. The treatment consists of the use of the douche of a solution of borax or sulphate of zinc if the inflammation is confined to the cervix. Medicated tampons, astringent and alterative applications, are helpful, but no caustics. Iodoform applied in the uterine cavity is very efficient, but its odor is objectionable. Complete closure must be overcome when it exists, and dilatation and drainage performed. Dilatation must be done gradually by graduated dilators. The complete removal of the uterus may be justified after other measures have been tried and failed, and when complete prolapsus exists vaginal hysterectomy is the proper treatment.

PATHOLOGY.

The Microbe of Mumps.

Our knowledge concerning this organism is both meager and uncertain. Various investigators have worked in this line, but their testimony is conflicting. Laveran punctured the parotid glands of patients suffering from mumps, and in the majority of cases a microbe having the form of a diplococcus was found.—*Modern Med.*

The Cause of Death in Extensive Burns of the Skin.

Kianicine has made some experiments to determine the presence of a ptomaine in the blood of animals affected with burns of large extent. In thirty-five experiments the ptomaines were found both in the blood and in the organs, while the blood of healthy animals, prepared in identically the same manner, did not contain this ptomaine. The method of Stas-Otto was employed in the same manner as is done by Brieger for preparing the pepto-toxine. Extraction is accomplished at a temperature of 80° C., with alcohol, evaporation, and the digestion of the remainder with a mylalcohol. Next, evaporation to dryness, dissolving the product in water, and purification by means of the subacetate of lead, by the use of sulphuretted hydrogen; and finally a purification by means of ether. This poison develops only in animals burned or scalded and is not a product of chemical manipulation. Some special reactions are given for it in the paper.—*Arch. de Med. exp. et d'Anat. patholog.*

ARMY AND NAVY.

CHANGES IN THE U. S. MARINE HOSPITAL SERVICE FOR THE FIFTEEN DAYS ENDING NOVEMBER 30, 1894.

Murray, R. D., Surgeon; to proceed to Key West Quarantine and assume command of station, November 17, 1894.

Carter, H. A., Surgeon; to proceed to Norfolk, Va., and assume command of service, November 17, 1894. Granted leave of absence for fifteen days, November 20, 1894.

Wasdin, Eugene, P. A. Surgeon; to proceed to Pittsburg, Pa., and assume command of service, November 21, 1894.

Williams, L. L., P A. Surgeon; granted leave of absence for sixteen days, November 20, 1894.

Magruder, G. M., P. A. Surgeon; to proceed to Galveston, Texas, and assume command of service, November 21, 1894.

Kinyoun, J. J., P. A. Surgeon; granted leave of absence for six days, November 26, 1894.

Perry, T. B., P. A. Surgeon; granted leave of absence for thirty days, November 20, 1894.

Goodwin, H. T., P. A. Surgeon; to proceed to Cincinnati, Ohio, to inspect unserviceable property, November 20, 1894.

Guiteras, G. M., P. A. Surgeon; granted leave of abscence for ten days, November 28, 1894.

Geddings, H. D., P. A. Surgeon; to proceed to South Atlantic Quarantine and assume command of station, November 21, 1894.

Perry, J. C., P. A. Surgeon; granted leave of absence for thirty days, November 24, 1894.

Young, Y. B., P. A. Surgeon; granted leave of absence for ten days, November 20, 1894.

Strayer, Edgar, Assistant Surgeon; to proceed to Boston, Mass., for duty, November 22, 1894.

Blue, Rupert, Assistant Surgeon; to proceed to Charleston, S. C., for temporary duty, November 21, 1894.

Prochazka, Emil, Assistant Surgeon; leave of absence granted November 14, 1894, cancelled November 26, 1894.

Thomas, A. R., Assistant Surgeon; to rejoin station (St. Louis, Mo.), November 16, 1894.

Cumming, H. S., Assistant Surgeon; to proceed to Norfolk, Va., for temporary duty, November 22, 1894. Granted leave of absence for eighteen days, November 27, 1894.

NEWS AND MISCELLANY.

Important to Commercial Travelers.

On and after December 1st, Baggage Agents of the B. & O. R. R. Co. will accept coupons from mileage books issued by B. & O. R. R., P. & W. R'y, B. & O S. W. R'y and Valley R'y of Ohio, in payment for excess baggage charges, at their face value, 2 cents each. This arrangement will not include B. & O. Mileage Books indorsed "good only on B. & O.," B. & O. Southwestern Mileage Advertising Books, nor books older than one year from date of issue.—2t

Reduced Rates for Christmas and New Year's.

The B. & O. R. R. Co. announces that excursion tickets will be sold between all stations on its lines east of the Ohio River during Christmas and New Year holidays, at reduced rates, for all trains December 22, 23, 24, 25, 29, 30, 31, and January 1, 1895, valid for return passage until January 3, 1895, inclusive.—3t

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ORIGINAL ARTICLES.

FOREIGN BODIES IN THE EYEBALL, WITH REPORT OF CLINICAL CASES.

J. HOBART EGBERT,* A.M., M.D., PH.D., HOLYOKE, MASS.

Many penetrating wounds of the eyeball are accompanied by the lodgment of a foreign body within the interior of the globe. Foreign bodies within the eyeball give rise to most serious complications, frequently determining the loss of the wounded organ and tending to induce sympathetic inflammation in the uninjured eye. They may be of various characters—bits of steel, iron, stone, glass, shot and the like being commonly met with. Foreign bodies which do not involve the vitreous chamber or implicate the ciliary processes may usually be removed by proper surgical methods and the eye saved. A foreign body lying upon or imbedded in the iris may be removed by excising the portion of iris containing it (iridectomy); a body loose in the anterior chamber may be removed by paracentesis of the aqueous or by a pair of fine forceps introduced through a corneal incision; while a body lodged in the lens may be removed by extraction of the lens—which latter is sure to become cataractous or, in young persons, to undergo solution by virtue of the injury. Foreign bodies which penetrate the cornea and lodge in the iris are likely to occasion purulent inflammation of that membrane, which inflammation may become by extension a highly dangerous iridocyclitis. The following case gives extensive illustration of this class of injuries:

CASE I.—Mr. Alfred Christian, aged twenty-five, was the victim of a mine explosion early in the fall of 1892. Besides several more or less extensive bodily injuries, his eyes and upper portion of face were filled with small fragments of stone. He did not come under the writer's care until about three weeks after the accident. All foreign particles were first removed from the cornea, a foreign-body needle and spud being used for this purpose. These particles had already occasioned considerable corneal irritation and even ulceration. There was suppurative iritis in the right eye, which had poured out a quantity of pus into the anterior chamber. This was evacuated by paracentesis. The lens of the right eye was not involved. The cornea and sclerotica of the left eye also held numerous particles of stone; a single fragment was lodged in the superior external quadrant of the iris and another in the lens, which latter was displaced. As soon as the cornea of this eye had gained sufficient integrity an iridectomy was made, which served both to remove the particle of stone imbedded in the iris and as a measure preparatory to the extraction of the injured and dislocated lens. The iris of the right eye was destroyed by the traumatic purulent inflammation which, as already stated, was well advanced when the patient applied to us for treatment.

* Chief Surgeon Hampshire Eye and Ear Infirmary; formerly Dean St. Louis Ophthalmic and Aural Institute, St. Louis, Mo.; author "Enucleation of the Eyeball: When and How to Operate," etc.

During the entire course of treatment, with the exception of the last week, the patient was kept quietly in bed, while the strictest antiseptic precautions were at all times observed. The eyes were bathed every morning and evening with a weak, lukewarm bichloride solution (1 part to 8,000), and after each bathing a fresh dressing of five per cent. iodoform gauze, upon which a small quantity of boric-acid ointment was usually spread, was bound over them by a double bandage. When discharged from our care the patient had fair vision in both eyes.

Thus we see that even a number of small foreign bodies in and about the anterior chamber of the eye may, when properly treated, be recovered from with resulting good vision; but with the vitreous chamber and its surrounding tunics the conditions are changed. Whenever a foreign particle finds its way into the vitreous an exceedingly serious case is presented; while if the ciliary region of the eye has been implicated by the injury the severity of the case is still more increased. While it is certainly true that injuries of the eye are momentous in proportion as they affect the vision of the eye injured, still they are doubly so in proportion as they tend to produce sympathetic conditions in the uninjured eye. Wounds accompanied by the entrance of a foreign body within the eyeball not only frequently destroy vision, but are prone to induce sympathetic ophthalmia; nevertheless, under certain favorable conditions these bodies may be removed, the eye saved and serious sympathetic conditions avoided.

The body entering the eye from before pierces the cornea or sclerotica, and passing through the lens or tunics beneath the sclerotica, may traverse the vitreous and lodge itself in the fundus of the eyeball; or, as is sometimes the case, having spent its force it falls to the floor of the vitreous chamber, perhaps rebounding from the posterior wall. The first consideration is as to whether the body can be seen, and the second whether or not it is of steel or iron and therefore magnetic. The ophthalmoscope is applied to the locating of these bodies, but as profuse hemorrhage often attends their entrance, the chambers of the eye are not infrequently filled with blood, so that the fundus cannot be properly examined. Under these circumstances, if there are no symptoms of inflammation, it is allowable to keep the patient quietly in bed for a few days to see if the blood will not be absorbed and thus permit an examination of the fundus and possible location of the body by means of the ophthalmoscope. In all such cases, however, the patient must be carefully watched by the surgeon, who must hold himself in readiness either to search for the body or to enucleate the eyeball as soon as inflammatory symptoms present themselves, manifested by pain, marked tenderness over the ciliary region and softening of the globe. When these conditions are present, if the body cannot be found and removed by an exploratory operation, the injured organ should be at once removed and sympathetic ophthalmia thus avoided. The writer is not aware of any authenticated case in which sympathetic ophthalmia ever attacked an eye after its injured companion had been removed—the uninjured eye being unaffected at the time of the removal of the other. Moreover, sympathetic *irritation* usually disappears upon enucleation of the offending member; but if the disease has once fairly broken out, the prognosis of sympathetic ophthalmia from any cause is most unfavorable, and even the immediate excision of the eye primarily affected at this stage of the trouble generally fails to have any, or only a temporary, beneficial effect. Realizing the ominous import of sympathetic ophthalmia, the surgeon, as well as the patient, should be ever watchful for its well-marked approach and proceed at once to active measures as soon as its dangers threaten.

A word concerning the methods now employed for removing foreign bodies from the vitreous chamber. For the removal of steel and other magnetic particles a specially designed magnet is the most useful appliance: the forceps, grooved hook and similar instruments have been employed but with doubtful success, and generally speaking the eye which incloses a foreign body is usually doomed. Still, a few cases of the successful removal of foreign particles from the vitreous, with restoration of vision, are recorded. Very rarely invading particles have become encapsulated and remained quiescent during long periods of time, but even in these cases they may be expected to ultimately occasion secondary

inflammation. Wolfe reported a case in the *Medical Times and Gazette*, January, 1876, of a minute particle of iron that had been struck off from a nail and entering the eyeball remained lodged in its tunics, close to the optic nerve, for almost eight years. The eye gradually became blind, but the foreign body remained quiescent for the length of time mentioned and then suddenly caused great irritation in the other eye. The injured eye was thereupon promptly removed and the irritation ceased.

The following cases illustrative of the general course and treatment of these conditions cannot fail to prove of interest:

Case II.—On Wednesday, April 11th, a man thirty-five years of age applied at the hospital for treatment and gave the following brief history: A few hours before he had been cutting a heavy plate of metal with a chisel and hammer, when a bit of steel from the edge of the chisel flew off, striking him in the left eye. Upon examination of the eye it was found that the particle had passed through the sclerotica, just without the ciliary region on the temporal side, and thus entered the vitreous. There was sufficient blood in the eye to prevent examination of the fundus and location of the foreign body by means of the ophthalmoscope, and it was resolved to wait a short time to see if the blood would not soon be sufficiently absorbed to render possible an illumination of the fundus. Friday night, however—two days and a half after his admission to the hospital—pain was experienced in the eye; it presented a cloudy appearance and incipient inflammation was plainly announced. The fact that active measures must now be employed was communicated to the patient, and he was told that an attempt would be at once made to remove the offending particle, providing he would give his consent to having the eye removed in the course of the same operation if the body could not be found or successfully removed. He accepted the proposition and the following afternoon the operation was performed. The patient was etherized, the lids held apart by a speculum, and the opening made through the tunics of the eye by the entrance of the foreign body was dilated. A magnet devised by us for this purpose was now introduced through the opening and thrust about in the vitreous. This was repeated three times without removing the piece of steel. As a final trial the magnet was introduced but a short distance and made to sweep about the inner portion of the opening in the globe, and when withdrawn it brought with it the piece of steel, which had evidently been brushed off by the lips of the wound upon a previous withdrawal. Antiseptic precautions were, of course, rigidly observed throughout the operation. The opening in the sclerotica was united by means of a fine silk suture and the eye dressed antiseptically. The conditions began at once to improve. Before operation vision was reduced to perception of light; five hours after operation, $V=\frac{2}{200}$; forty-eight hours afterward, $V=\frac{5}{200}$; and at the end of the first week, $V=\frac{20}{200}$. After that the sight steadily improved and in due time the patient was discharged from the hospital with good sight in both eyes. It is true that the ultimate result of such cases cannot be foreseen, for eyes which have been thus injured by accident and operation are quite like those eyes which contain latent foreign bodies, in that they may some day cause trouble, even though it be years after the receipt of the injury.

The following case, while less fortunate in its results than the preceding one, presents only too truly the general outcome of the class of injuries we are considering:

Case III.—Saturday morning, August 13, 1892, a young machinist's apprentice, twenty-two years of age, was boring with a fine drill a piece of steel, when the drill broke and threw a small fragment of itself into the right eye of the operator. The drill was revolving at a high speed when the fracture occurred, and the fragment was hurled with considerable force. The patient came under the writer's observation about 2 P.M. the same day. Simple inspection showed that the particle of steel had pierced the eyeball just within the sclero-corneal junction in the lower segment of cornea and had passed, evidently revolving the while, through the outer tunics of the eyeball, through the iris and through the margin of the lens. The ophthalmoscope revealed a clot of blood in the posterior chamber resulting from the wound in the iris, and a haziness of vitreous caused by blood in the vicinity of the optic disk. The body could not be seen. The prognosis for the eye was most unfa-

vorable. The patient was put to bed and enjoined to lie quietly on his back to await developments. During the afternoon and evening there was no considerable pain in the eye, but the next morning pain began and the following evening was constant and intense, showing that inflammation was imminent and enucleation of the wounded eyeball the only issue. On account of the severity of the pain the patient did not greatly object to the operation, and early Monday morning—less than forty-eight hours after the receipt of the injury—the wounded eyeball was removed and the bit of steel found, not in the vitreous chamber, but imbedded in the tissues of the orbit behind the globe.

Foreign bodies which have entered the vitreous chamber are thus seen to be exceedingly portentous, not only frequently causing sightless eyes, but tending to induce sympathetic ophthalmia; and these accidents have furnished and will still furnish numerous eyes for enucleation.

PUERPERAL PHLEBITIS.*

BARTON COOKE HIRST, M.D., PHILADELPHIA.

Of all the forms that sepsis can present in a woman after labor, phlebitis, I should say from experience in consulting practice, is least understood, most often mistaken for something else and most frequently maltreated by the general physician. And yet there is no form of sepsis that has so many distinctive and peculiar characteristics if they are known and looked for. The most misleading features in the disease, from a diagnostic point of view, are the late appearance of symptoms and the entire absence of local physical signs of inflammation. I have known a septic phlebitis develop as late as five weeks after labor, and in all cases uncomplicated by other forms of septic inflammation the womb involutes well, is freely movable and insensitive; the broad ligaments with the uterine adnexa are apparently normal, while the general symptoms of high fever, rapid pulse, profound prostration and metastatic developments may be most marked. It is this absence of local symptoms that strengthens the indisposition in us all to admit sepsis as the cause of disease in our patients after childbirth.

Symptoms.—A typical clinical picture of puerperal phlebitis presents the following characteristics: Evidence of disease appears ten days or more after confinement; there may have been a slight evening rise of temperature from the beginning of the puerperium, and during this time the patient may have appeared somewhat restless or anxious with a flush on one or both cheeks; the pulse also may have been somewhat accelerated, but there is scarcely enough in the woman's condition to attract her physician's attention. After a varying but considerable length of time, with the premonitory symptoms just described or with none at all, the temperature rises high in twenty-four or forty-eight hours, a chill sometimes but not usually preceding the fever. The pulse is rapid out of all proportion to the temperature, there is a dusky flush on the cheek or cheeks and patches of red may appear on other parts of the body, particularly on the chest. The tongue is very foul. The patient has an anxious, troubled, restless look, but if questioned may reply that she feels perfectly comfortable, or if she feels ill she cannot complain of any localized pain or discomfort. The abdomen is not distended nor is it usually at all sensitive to pressure. A vaginal examination is entirely negative. The disease once begun runs a most tedious course. I have attended two patients who were seriously ill, with high fever for four months, and I think the woman lucky whose illness is not protracted beyond three weeks. Another most distinctive feature in the course of the disease is the tendency to complete remission of the fever and of all other symptoms for more than a week perhaps; then there is a recurrence of high fever, rapid pulse and profound prostration—in short, a reappearance of all the old symptoms in their original intensity, but the relapse does not often last long. I have seen such a

*Read before the Philadelphia Obstetrical Society.

relapse recur three times in an individual who had been ill three months before the first remission.

Complications.—As is well known, the commonest complication of phlebitis is phlegmasia, but the latter is by no means a necessary consequence of the former. I have seen many a case run its course without a swelling in the leg or legs and a number of cases besides in which the phlegmasia was a transitory, scarcely noticeable phenomenon in the course of the disease. Phlegmasia is too large a subject to consider here, and I shall simply refer to some interesting features of it that have struck me in my own experience. I have the notes of sixteen cases seen in private, consulting and hospital practice. In two instances there was double phlegmasia. In one case the swelling first appeared seven weeks after childbirth. In two cases there was a combination of the cellulitic and of the thrombotic phlegmasia. In one case there was an abscess in the popliteal space; in another, in the calf of the leg. In several cases the phlegmasia began as a pure pressure thrombosis, but in all these cases the clot eventually became infected and there was some septic fever.

It is a fact not generally appreciated that the thrombosis of phlebitis in the puerperium is not necessarily confined to the veins of the pelvis and to those of the lower extremities. Large veins far distant from the seat of original infection may be affected. As an illustration, my friend Dr. Fussell has told me of a woman under his charge in whom the longitudinal sinus of the brain was found solidly blocked by a well-organized antemortem clot. She died four weeks after confinement, death being preceded by coma and convulsions.

Another well-known complication of septic phlebitis is a metastatic septic inflammation anywhere in the body. The brain, the eyeballs, the lungs, the pleura, the kidneys, the liver, the spleen, the subcutaneous connective tissue may be the seat of an abscess. I have seen in a puerpera the whole of one leg and a forearm riddled by the multiple abscesses of suppurative cellulitis.

Still another complication is profuse hemorrhage from the veins of the placental site. One of my students has recently told me of a case in which there were repeated alarming floodings in the course of a puerperal phlebitis, following attempts at intra-uterine disinfection.

Treatment.—The treatment of puerperal phlebitis is summed up in a short sentence: Abstention from local interference and the freest possible use of stimulants and food. Any attempt at intra-uterine disinfection will make the patient distinctly worse. There is imminent danger of causing metastases or hemorrhage by local interference. In one of my patients an intra-uterine douche was followed by a chill, and within twenty-four hours by suppurative pleurisy. In another the temperature rose to 106.8° after cleansing the uterine cavity. This indeed is a diagnostic feature of considerable value, and is occasionally the only way to distinguish between sapræmia and phlebitis, as the following clinical history proves: I saw in consultation a lady who had been delivered three weeks before. She had had a temperature of about 103° for two weeks; her pulse was rapid; there was profound prostration, and one of the most distinguished physical diagnosticians of Philadelphia had the day before detected an incipient septic pneumonia. The abdomen was flat and not tender. The uterus was well involuted and perfectly movable. There was a slight bloody discharge without odor. All this looked very much like phlebitis. I thoroughly disinfected the uterine cavity, however, and within twelve hours the temperature fell to normal, the signs of pneumonia disappeared and the patient made an uncomplicated recovery. Had this case been one of phlebitis, as it seemed to be, my local interference would have made the woman much worse. But in spite of this risk I always carry out one thorough disinfection of the womb, even in a case in which I feel pretty certain of the diagnosis of phlebitis. The clinical history just related is sufficient for such a rule of practice. Having established the diagnosis of phlebitis and having shown the futility of local disinfection, my routine treatment is as follows:

Milk, predigested if necessary, and predigested beef at regular intervals and in as great quantities as the patient can digest; whisky, as near a pint a day as she can stand; or, if necessary, champagne in larger quantities. Digitalis for the rapid pulse and quinine and iron by the bowel.

The patient is kept in bed for at least ten days after all symptoms disappear.

Prognosis.—In spite of alarming symptoms and long continuance, the disease should end in recovery in the vast majority of cases. I have only lost one of my cases of phlegmasia and two other cases of phlebitis, a mortality of about 10 per cent. Among the women who recovered were some as desperately ill as I ever saw, so that I approach a case of this kind with considerable confidence as to the result.

A PRACTICAL STUDY OF SERIOUS ABDOMINAL CONTUSIONS, WITH A CLINICAL REPORT OF TWENTY-ONE CASES.*

THOMAS H. MANLY, M.D., NEW YORK.

[CONTINUED FROM PAGE 824.]

TREATMENT—*continued.*

Michaux severely condemns exploratory incisions until the time arrives when symptoms of serious internal trouble are present. This is usually within twenty-four hours after the injury, but it is often a difficult matter to correctly determine (*Gaz. Fev.*, Mai Avril 12, 1892). Up to 1893 there were but 7 cases on record, according to this author, in which laparotomy had been performed successfully for rupture of the intestine following contusion of the abdomen; one each by Moty (*Bull. de la Soc. de Chir.*, January, 1890, No. 1, p. 48), Croft (Chir. Soc., London, March 14, 1890), Taboda (*Wien. kl. Woch.*, 1891, No. 45, p. 837), Michaux (*Bull. de la Soc. Chir.*, January 27, 1892), Ch. Nelaton (*Buil. de la Soc. Chir.*, October, 1892), Michaux (*Bull. et Mem. de la Soc. Chir.*, 1893), Bouffin (*Congrès Francais de Chirurgie*, 1893).

CONTUSION DE L'ABDOMEN INDICATIONS OPERATOIRE.

Moty, when reporting a case of mortal contusion of the abdomen in a boy who was kicked by a horse, comments on the many difficulties attendant on diagnosis in abdominal injuries. He declares that the proper course of conduct in this class of cases is not yet definitely determined, though the general rule at present which obtains among surgeons is to laparotomize when there are good grounds for suspecting intestinal perforation; but he nevertheless maintains that "when we are in doubt an exploratory incision is not permissible and the expectant or medical treatment should be the rule."

Mr. Stanley has reported two serious cases of abdominal injury, one recovering and one dying. No operation (27th vol. *Med.-Chirurg. Trans.*).

Chavasse collected 149 cases and noted that mortality in conservative treatment was about 30 per cent. ("*Contusion de l'Abdomen*," *Memoirs de l'Acad. de Med.*, January, 1872). In McKenzie's 111 cases with tentative measures the mortality was 6 per cent. In one of them the stomach was ruptured and in another was rupture of the spleen (*Med. Trans.*, vol. xiii, p. 207).

Krause, at the Anatomical Society of Paris, presented the report of a case of violence to the abdomen of a man in which the question of laparotomy had been raised. Patient died in eighteen hours, and on post-mortem examination it was found that the duodenum was ruptured and the abdomen badly contused. Dr. W. B. Corson (*Jour. Am. Med. Ass'n*, November 5, 1887) published the case of a boy who had been kicked on the abdomen by a horse. He was seen ten days later, when he was moribund. On autopsy a rupture of the ileum was discovered, with free escape of its contents into the peritoneal cavity. This author favored early incision when patient could safely bear it.

The same author cited Dr. J. Gregory's case of a boy who fell but four feet, striking his abdomen on the edge of a ladder. In six hours death followed. An extensive rupture of the ileum was found near the cæcal junction.

Joubert ("*Traité de Maladies Chirurgicales du Canal Intestinal*") while dwelling

*Read at the annual meeting of the New York State Medical Association, October 10, 1894.

on this topic says that direct compressive force against the vertebral bodies is the preponderating cause of intestinal rupture; and adds that the repair of such an opening is very frequently satisfactory and prompt by atresia of the damaged wall to its healthy neighbor.

Tillaux, while a strong advocate of abdominal section in appropriate cases, nevertheless dwells with considerable fullness on the remarkable tendency of the peritoneum to take on adhesive inflammation. He would immobilize the intestine and administer opium with a free hand.

Mr. Edmund Owen, in "St. Mary's Hospital Reports," gives an interesting summary of the case of a man who was injured by a fall on the abdomen. Was seen by him the morning after injury. He had peritonitis and symptoms of a ruptured intestine, but was in shock when seen. On the following day symptoms were aggravated. Now, with patient's concurrence, abdomen was opened and a large rent in the intestine found within six inches of the head of the colon. Patient rallied fairly well but sank about six hours after operation. Mr. Owen thought that an earlier section might have saved his life, and concludes that in cases of an extensive rupture of the bowel death is sure to result, while a timely operation offers the only hope of saving life.

In a considerable number of grave injuries of the abdomen, symptoms of intestinal extravasation occur only as secondary phenomena. The intestine has been severely contused, or perhaps only a limited area of its wall; gangrene or ulceration follows any time from three to ten days, and a fulminant type of peritonitis follows.

Probably in this class of cases when primary shock has been survived the best prospects of good results follow laparotomy. Judging from the accumulated reports of laparotomies necessitated by abdominal contusions, it must be admitted that the prospects of success following them are very discouraging, and that the cases which demand them are so depressed from a general collapse or a sinking of the vital powers that a major operation is generally succeeded by a fatal termination.

As may be conceived, the mechanical therapy of visceral traumatisms within the abdomen is not always very difficult. But the great impediments to its success are the terrible tendency to additional shock after the peritoneum is opened and the imperative necessity for celerity of manipulation. Besides, notwithstanding what may be said to be contrary, peritonitis invariably follows every time the cavity of this sensitive serous membrane is opened, constituting in itself a fresh element of danger to life.

We have it on the most unimpeachable testimony that alarming symptoms may follow an abdominal contusion without any palpable pathological changes whatever. In a case of this kind would it not be a calamitous step to open the abdomen in search of a phantom—perhaps kill our patient outright through fresh shock or light up a fatal peritonitis?

But laparotomy, serious as it must be viewed, in cases of abdominal contusions associated with intestinal rupture which have survived shock and in which its indications are clear, offers the only hope of preserving life and should be recommended. Let no tyro, however, undertake it. Better thousand times to leave the case to nature; for this operation to succeed at all requires special skill and experience, a most thorough preparation of the patient and his surroundings, attention to detail and intelligent after-treatment.

The latest which has come into my hands on the discussion of abdominal contusions is from the Surgical Society of Nancy. It appears in the form of an essay and discussion which are so pertinent and interesting that nearly a full transcription of it seems warranted.

Vautrin began by affirming that "neither the violence of a traumatism, nor the shock following the first few hours after injury, nor the appearance of rapidly developing peritonitis, enabled us to diagnose with certainty rupture of the intestine in abdominal contusions." He further added that "when there were indications pointing to intestinal rupture there was no symptom which pointed to the part of the alimentary canal involved." As a rule, peritonitis only made its appearance after an interval of calm after primary shock had passed off. He would advise that immediately after injury, when there were reliable indications of intestinal rupture, the abdomen should be opened and an exploration made. For,

properly performed, he thought it would not augment the risks; and besides, if any benefit were to follow operation it must be now or not at all.

He had recently observed two cases. One was a man 40 years old, a teamster, who had been violently crushed in the right flank. Some hours after injury he was brought to the hospital and seen by Vautrin. Laparotomy was performed. Next day general peritonitis was well marked; there was great pain, intense thirst, exhaustion and fæculent vomiting. By autopsy a rupture of the small intestine was discovered midway between the pylorus and the cæcum. Besides, there was a slight laceration of the right lobe of the liver. The peritoneal cavity was filled with blood and intestinal contents.

The second case was a young man of 23 who fell 3 meters from a ladder. He was seen the day following injury. There was then ballooning of the abdomen, but no severe pain except over the umbilicus. Slight nausea and retching; pulse 125, but regular; temperature 36 5° C. The next day he remained about the same, but abdominal meteorism was increased. Laparotomy was proposed, but the family refused. The same night alarming symptoms set in and he died at three in the morning. An autopsy was denied.

From these two unfortunate cases and other observations Vautrin believed that surgical intervention was rather to be preferred than expectation. It was true that a great risk was entailed when one operated under shock, yet he alleged that it offered the injured the only hope.

M. Weiss, in the discussion which followed, declared himself a partisan of early operation when anything like definite indications were present; still he alleged that diagnosis was attended with difficulty. He cited the case of a young woman who had been kicked by a horse, in whom it was at first supposed the intestine was wounded, but who after a few days' rest made a good recovery.

Regnier cited the case of a cannoneer who was accidentally crushed over the abdomen. He saw him 24 hours after the injury. At this time the pulse was small, the face pale and the abdomen flat. Internal hemorrhage was diagnosed. The patient refused operation and died on the third day. On autopsy an extensive laceration of the liver was found.

M. Heydenreich agreed that when we were assured that there was intestinal laceration of considerable extent laparotomy should be resorted to. But we are usually in ignorance of this until it is too late to interfere. Two cases of serious abdominal contusion had come under his care. In one a man of 40 years had been kicked by a horse. Peritonitis promptly followed and he sank on the second day. A post-mortem examination showed an extensive rupture of the small intestine. In another case a man of 44 years had sustained two kicks from a horse over the abdomen. A fulminant type of peritonitis followed, but after the fourth day it began to decline and he ultimately made a good recovery. He believed that it should be more generally known that laparotomy itself is attended with about 25 per cent. mortality under any circumstances. In these cases it greatly augmented the danger to life and few survived it. It was temerity to open the abdomen in all, and was not justifiable in any but rare instances.

M. Froelich declared that it all depended on the degree of peritoneal shock present what course one should pursue. He had seen Professor Goltz, at Strasbourg, instantly kill a large dog by a blow on the abdomen which left no trace of lesion discernible on post-mortem examination.

M. Gross (*Rev. de Chirurg.*, September, 1894) communicated six observations for contusion of the abdomen, with the following brief recapitulation.

First case. A young man was thrown from a carriage, the wheels passing over the umbilical region. Alarming symptoms on the first day; menaced by peritonitis for four days; amelioration commenced on the fifth day and recovery was complete in one month.

Second case. A youth of seventeen years fell from a loft, striking on the wheel of a carriage. Peritonitis. Death on the fourth day. No autopsy.

Third case. A man of thirty-two kicked by a horse over the liver. Symptoms of hepatic injury with acute peritonitis. He sank after two months' illness. On autopsy suppuration of the liver was found, with gangrene of the small intestine near the jejunum and complete obliteration of the superior mesenteric artery.

Fourth case. A man of sixty-two fell

on an iron arcade. Subacute peritonitis. Laparotomy twenty-four hours after injury. Blood and fæculant matter in the peritoneal cavity. Suture of ruptured intestine; closure of the peritoneum. Death in twelve hours.

Fifth case. A young man of eighteen fell and was run over by a carriage. Threatened peritonitis for fifteen hours. Rapid recovery.

Sixth case. A woman of thirty years knocked down by a runaway and crushed over the abdomen. Menaced by peritonitis for thirty-six hours. Return of symptoms on third day with symptoms of intestinal obstruction. Died on the fourth day. On autopsy intraperitoneal hernia with strangulation was found.

M. Gross summarizes these cases as follows:

There were four deaths. The great factor which adds to the gravity of complicated abdominal crushes is the visceral complication.

First. Operative medicine judiciously applied must be our main reliance in all severe cases.

Second. To derive any benefit from operation it must be instituted early.

Third. Unhappily, an accurate diagnosis is not always possible. The surgeon must often delay until the time is past for surgical relief.

Fourth. In doubtful cases it is better to delay than venture a lapårotomy.

INTRAPERITONEAL HEMORRHAGE.

In cases of sudden exsanguination from intraperitoneal hemorrhage from abdominal crushing, should the peritoneal cavity be opened and its source sought for? On superficial reasoning one might say, Certainly; why not?

The late Dr. Chas. F. Parkes and others believed that by opening the peritoneum and admitting the atmosphere it favored the arrest of hemorrhage. But this is clearly an error, for such is not the case. When we appreciate the fact that great hemorrhage comes from the laceration of a solid viscus or the opening of a large blood-trunk, in which case to interfere is to destroy life; that the serous secretion of the peritoneum is alkaline and favors coagulation of the blood; that the source of hemorrhage is equally but firmly compressed on all sides, the degree of pressure being the greater the larger the escape, then it is more apparent that a laparotomy adds new dangers and interferes with nature's means of subduing bleeding. The utter futility of attempting to subdue the intra-abdominal hemorrhage when large trunks within the abdomen are opened was recently illustrated in the case of the assassination of M. Carnot, when MM. Ollier and Poucet in vain tried to stem the tide which was springing from the cava, portal vein and hepatic artery.

Two cases of very large intra-abdominal hemorrhage came under my care last May (1894), one from a gunshot and one from a crush. Both were laparotomized. The blood torrent which issued through the incision in both when the peritoneum was opened was awful and could not be controlled. Both died on the operating-table. One, who had a ruptured spleen, might have been saved had he been treated on the expectant plan. Both, I am positive, would have survived much longer had they been left alone. When an opening is made and the blood is allowed to escape outward the loss or waste is irretrievable. But when pure aseptic blood is taken back into the economy there is a great gain. My experience and knowledge gained from a fairly practical acquaintance with these cases convince me that a laparotomy is not to be recommended in any type of hemorrhage succeeding abdominal contusion; that the chances of the patient are much enhanced by local and constitutional measures which do not imperil life.

INJURIES IN THE HYPOGASTRIUM AND INGUINAL REGIONS—VESICAL RUPTURE AND TRAUMATIC HERNIA: THEIR TREATMENT.

If the wall of the bladder be ruptured in the space of Retzius, the infiltrate into the cellular tissues will probably undergo resorption and the rent close of itself. But when the opening is through the fundus and penetrates the peritoneal coat, the danger of peritonitis is great and a laparotomy may be required to close in the breach.

Sir Wm. McCormick cites 16 cases of intraperitoneal rupture of the bladder from traumatisms. Six were operated on and saved ("Encyclop. Surg.," vol. vi., p. 327).

Mr. Reginald Harrison says that "when rupture of the bladder has extended into the peritoneal cavity, I can find no evidence to warrant the belief that life has ever been saved without surgical operation. When life has been saved it has been due to the aid of the surgeon" (*ibid.*, p. 327).

But vesical wounds heal with surprising rapidity, and I am not sure but the latter author has rather exaggerated the dangers of temporizing. My own practice would be to catheterize with great caution and watch for the onset of serious symptoms before instituting radical measures. The intestines fall snugly over the wall of the bladder; they may quickly become adherent to it and effectually confine the urine. The bladder being kept empty, no tension is placed on its wall and union is favored. Boracic or benzoic acid may be freely given by the mouth for their sedative and healing effects on the vesical mucous membrane.

If, however, there be great and constant pain in the hypogastrium, with marked constitutional irritation and vesical tenesmus, our diagnosis is positive and we may consider the propriety of a laparotomy, but not otherwise.

TRAUMATIC RUPTURES (HERNIÆ).

Guthrie, Pirrie and other authors allege that atrophic changes often occur in the muscles of the abdominal walls after contusive violence over any part of them. If this allegation can be supported, then it behooves us to endeavor to prevent such changes or modify their effects by appropriate treatment. In a considerable number of abdominal injuries which have come under my observation, no such sequelæ have been noted; nor can I find any mention of them in the works of many of the most celebrated authorities.

Kicks or crushes over the inguinal planes which are devoid of a complete muscular investment, one might assume might provoke such an extensive rupture of the aponeurotic fibers as would permit the intestine to slip through. It would seem reasonable to believe also that great compressive force over the parietes might so displace the viscera underneath that they would engage in or pass through the canals of emergence.

Aponeurotic fibrous structures, however, probably are as resistant to force as are the muscular, and hence are never extensively rent except when the organs invested by them are seriously damaged. We will sometimes have a patient who has an old hernia tell us that it was caused by a blow or fall in early life; at least, that he was not aware of its presence until after this event. In these instances the weight of opinion is that the evolution of the hernia was probably but a coincidence, or at most that a predisposition existed and the traumatism was but an exciting cause. There is no direct proof that local contusions over the abdomen will provoke hernia. Compression over the abdomen *en masse* certainly will not, as several cases which have come under my care demonstrate; such cases as result from buffer crushes, those cases in which heavily loaded vehicles have passed over the abdomen, and those in which the patient in a fall has struck with great force on the abdomen.

But if such injuries cannot be said to directly cause herniæ, they certainly do leave the contused over-strained muscles weak; so that when one rises he feels a dragging sensation in the back, the lax abdominal walls permitting of a sagging of the floating viscera and an undue tension of the mesentery which has its anchorage over the bodies of the lumbar vertebræ.

Now, a girth or broad belt will give great support and afford much comfort. It should be worn until tone is restored to the abdominal muscles, till their nutrition is improved and their functional vigor is regained. Heavy lifting and violent exercise should be eschewed for a considerable period; for a structure once seriously damaged on violent abuse is certain to manifest a diminished resistance.

[TO BE CONTINUED.]

Jinks' Fool Notion.

Winks—Did you ever notice that during hard times religious revivals always start up and the long-empty churches are sure to be filled?

Jinks—Yes.

"How do you account for it?"

"Salvation's free."—*New York Weekly.*

THERE is no use in talking any higher than we live.—*Ram's Horn.*

COMMUNICATIONS.

ACCIDENTAL AND CONCEALED HEMORRHAGE, WITH REPORT OF A CASE.

JOHN STROBEL, PH.G., M.D., PHILADELPHIA.

The so-called accidental hemorrhage, or that which occurs from premature detachment of the normally situated placenta, is not frequent and especially its grave form is rare. The hemorrhage may be open or concealed, or both forms may be present. In illustration I report the following case:

Mrs. S., aged thirty-eight years, multigravida, when at the end of the eighth month of pregnancy was suddenly seized with pain and severe hemorrhage from the uterus. I was immediately summoned, for the patient's condition was alarming. The blood flowed from the uterus to the amount of nearly a quart in a few minutes. The finger readily entered the uterus. The os uteri was dilated to the size of a silver dollar and was soft. The uterus was greatly distended. The pulse was very rapid and weak; the expression anxious; the body agitated with tremors and covered with cold sweat; pupils dilated; heart's action weak, irregular and beats intermittent; respiration shallow and hurried; very anæmic.

Treatment was whisky by the mouth and a hypodermic injection of sulphuric ether; the head of the bed was lowered by raising the foot; the vagina was washed out with hot bichloride solution (1:4,000) and tamponed with iodoform gauze. As soon as the patient began to rally the gauze was removed, the membranes ruptured and podalic version performed. The placenta was completely detached. With it there came away several very large clots, about the size of a fœtal head. The child was dead. Mother has made a good recovery.

TRANSLATIONS.

TYPHOID FEVER AND SECONDARY INFECTIOUS ERYTHEMAS.*

DR. L. GAILLARD, PARIS, FRANCE.

GENTLEMEN:

You observed in the Rostan ward a girl of seventeen years affected with a generalized and decidedly desquamative erythema. When you approached her bed she was lying upon her side, her face turned toward the wall, avoiding the light, silent, motionless and prostrate. And when, spoken to by me, she consented to change her position in bed, you noticed a swollen and puffed-up face whose skin was of a uniform redness and about to cast off a number of cuticular scales which were still slightly adherent.

On uncovering her you remarked the scarlet color of the whole surface of the body and the numerous flakes of skin which were easily detached by a touch of the finger-nail. This patient does not have the scarlet fever, for in this disease the desquamation does not coincide with the eruption, there being an interval between the two morbid acts. This case offers a beautiful example of scarlatiniform desquamative erythema. Should we say scarlatiniform? Assuredly, for the scarlet redness is absolutely diffuse, uniform and generalized, and for the moment there is no better term. But remark well, this false scarlatina which I have submitted to your examination only has

*A clinical lecture delivered at the Hopital Saint-Antoine. Translated from La Semaine Medicale, No. 56, 1894, by F. H. Pritchard, M.D.

deserved this term since yesterday. The day before yesterday you would have been quite justified in saying a generalized papular erythema, for then I was able to show you groups of confluent papules with which certain portions of the skin were spared, so that the primordial element of this eruption was not the scarlatinoid patch, but a papule. A day later you might even have called it a polymorphous erythema if there were not discernible here and there slight vesicles, bullæ and other irregularities of this exanthem. I am not one who rejects a precise terminology, especially in speaking of skin diseases, but in this particular instance we may disregard the modalities of the eruption. The prognosis is the special feature here. All the signs point toward a grave state for which the erythema might be called malignant or pernicious. Pathogenically, this eruption is the cutaneous manifestation of an infection, and this infection is secondary to typhoid fever if it be not a variation of the disease itself.

This girl indeed has had the typhoid fever, and it was only when she was becoming convalescent that this formidable complication burst forth. The history of her case is, in short, as follows: Affected with measles at the age of five, she had at two different times suppurating cervical lymphatic glands; at the age of fourteen she first menstruated. January, 1894, she came to Paris to work as a domestic. She had suffered for several days with pains in the ankles, with fever and a disordered stomach. July 23d she felt so weary that she was obliged to lie down before noon; headache, epistaxis, loathing of food, fever and all the symptoms of the beginning of a serious disease appeared. I believe that I am justified in regarding her as being at the seventh day of her typhoid attack when, on July 29th, she was entered brought to the hospital and placed under the care of my colleague, M. Ballet, whom I succeeded on the 1st of August.

When I first saw her on that day a diagnosis of typhoid fever was beyond a doubt: stupor, distention of the abdomen, dryness of the tongue and lips, rose spots, bronchitic râles at the bases of both lungs, with which the clinical picture was complete. The temperature, which until then had remained below 40° C., for the first time went down to 39.1°. August 2d, in spite of repeated sponging, her temperature in the evening reached 40.8°; cold baths were therefore indicated.

It is useless to dwell upon all the details of the evolution of the disease. With cold baths, intestinal antiseptics, especially lactic acid, and then benzo-naphthol, we arrived without incident at the twenty-third day of the disease, when an eschar was noticed on the left elbow, while a vivid redness of both buttocks was also discovered. The temperature still oscillated in the neighborhood of 39°.

The next evening upon coming out of the bath she had a prolonged chill and soon became livid; her feet were icy cold; the temperature by the vagina fell to 34°. We hastened to warm her, injected ether hypodermically, yet the collapse persisted until morning. On the 16th of August, the twenty-fifth day of the disease, her temperature was still very low, 35.6°; she suffered from vomiting of a greenish matter, meteorism, with an exquisite pain in the right iliac fossa, facies abdominalis, cyanosis, but no melæna. These symptoms led us to diagnose an acute peritonitis from perforation and to doubt the existence of intestinal hemorrhage. The prognosis appeared decidedly gloomy. I ordered an ice-bag applied to the abdomen, frappéd champagne and a little opium.

In the evening the temperature had risen to 38.2° and she began to grow warmer. During the days following the abdomen remained distended and painful, but the general condition improved and the temperature varied between 38° and 39.5°. On the 21st, the thirtieth day of the disease, we found an explanation of this persistent fever. Under the eschar of the left elbow a phlegmon had formed. Incision and drainage of the abscess caused the temperature to fall to nearly normal almost immediately. This done, a prompt recovery seemed to be hoped for; but in typhoid fever, as you know, one must always look for the unexpected. Now, on the 31st of August, the fortieth day of the disease, on removing the dressing of the elbow I noticed there a diffuse redness with a tendency to invade the greater portion of the upper extremity. As the day before we had substituted for the usual compresses wet with a solution of boric acid a dilute Van Swieten's solution, it was only natural to attribute the irritation to the sublimate, as I had observed the same condition to follow a salol dressing. I hastened to return to the inoffensive

boric solution, but the impulse had been given, and very rapidly the erythema gained the wrist and the root of the arm, while the papules also appeared upon the other arm, the buttocks, knees, the dorsa of the feet, then the groin, abdomen, neck, chest and face. It was not long before these papules became confluent, and in several portions of the epidermis fine vesicles appeared; on the hands small bullæ and on the soles of the feet large blebs filled with serum. At the same time the tongue began to clear up. To-day, the 9th of September, the erythema deserves to be called scarlatiniform and desquamative. I call your attention to the tumefaction of her face, the prostration, the lack of appetite and the presence of albumen in the urine. I would emphasize the gravity of the symptoms of infection and the malignancy of the disease.

One word upon the evolution of the fever. Since the 31st of August, when the first papules were noticed, the temperature has slowly risen. On the 1st of September in the evening it reached 38.4°; the next day 39.5°; the 3d 40.4°; and finally it reached 40° each evening, becoming somewhat lower in the morning. Yesterday, however, it did not reach 39.4°. The temperature is, in fact, the same as in an ordinary relapse. To recapitulate, we have observed:

1. A fever period of thirty days.
2. A period without fever of six days.
3. A slow ascent of the temperature with oscillations between 38° and 40°.

Internal treatment consists of tonics alone; internally she receives frappéd champagne, which she has drunk since the attack of acute peritonitis, and besides, coffee. Milk is offered her as often as she will take it. Externally a salve of borated vaseline with starch as a dusting powder is employed.

I have abstained from using any of the antiseptic remedies which the condition of infection would seem to demand, as there is not one of them which is not capable of aggravating the eruption and of producing erythemas of themselves.

Here the question is particularly delicate. I have mentioned both salol and sublimate dressings as giving rise to cutaneous irritation. Should we attribute all these symptoms to the dressing alone? Are we to admit a grave mercurial poisoning—a hydrargyria maligna—as we sometimes see in subjects with a peculiar sensibility to mercury? I do not hesitate to state that it is a mere coincidence. That the erythema has begun under and around the dressing is because it has a special predilection for irritated surfaces. Apply, for example, a mustard plaster to the back of a child who is about to break out with the chicken-pox, and you will see the vesicles form especially upon the irritated surface. The same holds true of other eruptions. Besides, I rely upon the evolution of the morbid phenomena in rejecting the hypothesis of a mercurial erythema.

An infectious erythema being admitted, how is it related to the foregoing typhoid fever? Must we regard it as a late symptom, an accident or a complication of the disease? Is Eberth's bacillus or other microbes to be blamed?

Before going into the bacteriology, let us examine the clinical side. You know, firstly, that this exanthem is by no means an ordinary symptom in the disease; it is indeed exceptional. Among the physicians whom you might consult on this subject several would confess their ignorance; others will say that they have observed it two or three times during a long practice; still others will state that they have long looked for but have never met with it. And if you open your books you will find but a meager number of observations.

The earliest is that of Forget (1843), which was of a scarlatiniform erythema appearing on the tenth day of the fever; then follow the cases of Mazeron (1866), Eichhorst (1875), Normand (1875), Murchison, Cottle, Reymond and Nélaton (1878). In 1880 Maurice Reynaud began to infuse a little order into the description of the eruptions of typhoid fever which he divided into early and late manifestations. Since this epoch there are works of Keromnès, Reynaud, Lemaigre, Lory, Moore, Hutinel and Martin de Gimard, Mussy, Legendre.

A perusal of this literature permits one to assert that besides the usual rose spots there are in this disease several varieties of erythema which may be considered from three points of view: the epoch of appearance, clinical physiognomy and gravity.

I. *Epoch of Appearance.*—Certain erythemas may precede the rose spots. They are called early and even premonitory, for

they have been called "rashes." In two of Wepham's cases they were scarlatiniform. Others are noticed after the first week and the rose spots in the second and third weeks. Still others are observed during convalescence, either with disappearance of the fever or after a few days of normal temperature. In relating the history of our case I have shown that the erythema constituted a sort of relapse, in which the process exhausted itself in the skin instead of Peyer's patches. Hence we may designate it a pseudo-reversive erythema. Though with the eruption it is evident enough, I should not dare to affirm the integrity of the patches, for in a case reported by Legendre last year before the Paris Hospital Society the erythema was connected with an actual relapse. It appeared on the sixty-first day of the disease, the relapse setting in on the forty-second, and the necropsy demonstrated the truth of the relapse. On the hundred and second day there were still ulcerations in the intestines.

Clinical Physiognomy.—Some authors have observed the scarlatiniform or morbilliform rash, but this is an exception. In the majority of cases the eruption is characteristic and observed in all infectious diseases. Whenever it may appear it is first noticed upon the backs of the hands, wrists, elbows, legs, knees and buttocks as rounded macules or papules but little elevated above the skin and disappearing under pressure. At first isolated, they soon confluesce and form patches which are symmetric. This is the beginning. In certain cases the eruption extends until it involves the entire body in a uniform and scarlatiniform rash. But this is not all. The papules may become covered with vesicles, bullæ or pustules. On an average the eruption does not last more than five or six days, and it is before the disappearance of the red tint that desquamation sets in. When the patients survive this, follows slowly in large flakes, as in scarlatina. It corresponds more or less with the intensity of the eruption.

Gravity.—Several writers have regarded these rashes as devoid of importance. Raymond and Nélaton declare that its influence was only favorable in their three cases and without characteristic impression on the disease itself. Chédevergne also saw a salutary influence from the cutaneous congestion. We to-day must look at this more pessimistically, for in typhoid-fever subjects infectious erythemata have claimed enough victims to force us to regard them as malignant and carrying a gloomy prognosis from the moment that the first papules are seen. Out of 12 cases of Hutinel and Martin de Gimard there were 7 recoveries and 5 deaths; in those of Legendre 3 deaths. And among those that recovered several had a terrible struggle for life.

Therefore, in my opinion, we must hold by Nélaton's and Raymond's statement that every erythema appearing either at the stage of full development or in convalescence is an indication of a severe infection.

What is the exact nature of this infection? Streptococci play an important part in certain typhoid subjects. The bacterium coli has also been incriminated. Very recently Bosc described it as of an intestinal infection from a microbe resembling the bacterium coli. Numerous microörganisms might easily enter the organism through various points of entrance, as the ulcerations of the intestines, the excoriations of the skin and mucous surfaces. Hutinel emphasizes the importance of labial fissures, aphthous erosions of the lips and mouth, erosions of the nose and ulcerations of the throat which he observed in his patients. In our case the eschar on the elbow and the succeeding phlegmon formed important foci of microbic activity Whatever it be, beware of looking slightingly on cutaneous efflorescences. Use no internal antiseptics which may aggravate the exanthem, and only give tonics. Give alcohol but moderately, as albuminuria is the rule in grave cases. Prescribe alkaline drinks and milk. If the temperature rise do not fear to advise cold baths. Calm the cutaneous irritability by emmolient salves and inert powders. Be on the watch for visceral complications—endocarditis, pleurisy or broncho-pneumonia. Examine the abdomen frequently, for the erythema may be the sign of a return of intestinal changes.

Is there a danger of contagion and should the patient be isolated? Certainly, though the risk is slight. Whenever the cases appeared in a series the list has been noticeably short. The 3 cases of Raymond and Nélaton concerned three persons in the same ward. That was in 1878,

when this disease affected Parisians with greater severity than at present. Legendre also reported last year 3 cases in one ward in typhoid-fever patients and 1 in a case of Bright's disease. But the only epidemic worthy of the name is that described by Hutinel and Martin de Gimard. It occurred in 1889 at the Children's Hospital. From June 1st to December 1st there were 38 cases of typhoid fever, and of these 12 were affected with infectious erythema, and that from the beginning of September and in two distinct wards. *But only the typhoid cases were affected* and none of the more or less debilitated children who lay in the neighboring beds. Thus this pretended epidemic attacked only the typhoid subjects and respected the others. You can understand my skepticism.

Besides, if you desire further information look outside of the narrow limits of this disease, for these erythemata are not the exclusive property of typhoid fever. They are observed in diphtheria, septicemia, in puerperal infection, gonorrhœa, and especially in cholera. In this latter disease it is much less rare than in typhoid fever. I have observed it in 1892 in 21 cases out of 400. Some authors hold it to be still more frequent. Duflocq has reported 18 cases in 215. Now, this eruption has a singular similarity to that of typhoid fever. The papules begin on the backs of the wrists, on the forearms, the ankles, around the knees, the buttocks and are symmetric. They then invade other regions, forming large plaques which may become scarlatiniform and desquamative. In my experience with the cholera I have not observed a single fact which might explain the contagiousness of the exanthem. Among the many physicians who have cared for these patients, none has believed in the transmission of the eruption by artificial means. More work is necessary to fix the bacteriology of this erythema after typhoid fever.

THERAPEUTICAL SUGGESTIONS FROM FOREIGN JOURNALS.*

PNEUMONIA IN CHILDREN.

Dr. D. C. Loewenthal (*La Semaine Médicale*, No. 66, 1894) recommends as an efficient measure to control the high temperature of pneumonia in children the following formula:

Phenacetine.....	āā o	06	gr. j
Sulphate quinine.....			
Caffeine.....	āā o	01	gr. 1-6
Benzoate soda.....			

For one powder. Make twelve such. One every two to four hours in a child of sixteen months.

BONE-MARROW IN ANEMIA.

Drs. Fraser and Begger (*Wiener Medizinische Presse*, No. 44, 1894) have obtained very satisfactory results with marrow of bone in the treatment of anemia. The former had under his care a man who had suffered for several years with grave anemia where the different preparations of iron and arsenic were inactive. The patient was ordered to eat daily one hundred grams (over three ounces) of the marrow of beef and calves' bones; iron and salol were also given at the same time. In three weeks there was a distinct improvement of his general condition, which was apparent in an increase of the hemoglobin and the number of blood corpuscles. Several weeks after this the patient was able to go to work. Dr. Begger employed this treatment in a boy of twelve years who had suffered for a long time from splenic leucemia, which in spite of iron and arsenic in large doses continued to become worse. At the time of beginning treatment he was very weak; his spleen filled nearly the whole left portion of the abdomen, reaching to the iliac fossa on that side and extending five centimeters over the median line. There were besides, fever, diarrhœa, frequent nose-bleed, dyspnœa and palpitation of the heart. Three or four times a day he received a piece of bread to eat upon which was spread a thick layer of raw marrow. In eight days the icteric color of his skin had disappeared; the fever ceased, the dyspnœa and palpitation vanished in two weeks, while the spleen decreased somewhat in size. The organ gradually diminished in size and the child recovered fully.

BICARBONATE OF SODA IN ARTHRITISM.

Dr. A. Cavazanni (*La Semaine Médicale*, No. 66, 1894) has found the bicar-

*In chage of the translator, F. H. Pritchard, M.D.

bonate of soda to be the best remedy in the treatment of the articular and muscular pains, either with or without swelling, of arthritic patients. It must be given for a long time, in doses of one to four grams (grs. xv–3j) a day. With this simple and efficacious measure he has succeeded in relieving eight cases where other remedies had failed. He would not advise its administration in powder, but rather in a weak solution while the stomach is empty.

LARYNGEAL STENOSIS OF DIPHTHERIA.

Dr. Brenner (*Muenchener Medicinische Wochenschrift*, No. 44, 1894) in two cases of laryngeal stenosis from diphtheria observed a remarkable relief by application of cantharidated collodion to the region of the thyroid cartilage to the extent of a spot of the size of a dollar.

CHLOROFORM IN LABOR.

Dr. M. Latta (*La Semaine Médicale*, No. 66, 1894) administers chloroform to all his cases of labor, even if they are perfectly normal in course. In those cases presenting a weakness of the heart he employs a mixture of chloroform and amyl nitrite, containing ninety parts of the former to one of the latter.

UTERINE COUGH AND ITS TREATMENT.

Dr. P. Profanter (*Revue Internationale de Medecin et de Chirurgie Pratiques*, No. 18, 1894) has observed a goodly number of those cases which were described by Aran as uterine cough and which is a reflex affection accompanying various chronic diseases of the female genital organs. The cough being very persistent and occurring in emaciated and weakened women with chronic gynecological diseases, one might easily be misled into making a mistaken diagnosis of pulmonary consumption. The cough is dry, hacking and sometimes hoarse, setting in after the uterine disease has become chronic. Its aggravation during the menstrual periods may set one upon the right road to diagnosis. Bimanual examination will reveal particularly painful points in the pelvis which, upon pressure, will provoke an attack of coughing. Treatment should be directed toward the original affection, yet only at once in robust patients, for in nervous, weakened and irritable women local treatment may cause a distinct aggravation. Therefore the general health must first be improved by hygiene, hearty food, forced feeding, treatment of the concomitant gastro-intestinal symptoms as well as by a quieting the general over excitability by the bromides, hydro-therapeutic measures, etc., while local measures are reserved for a later period. Locally one may employ vaginal injections of hot saline solution and warm compresses to the abdomen.

THE DIFFERENT VARIETIES OF DIET IN CHRONIC BRIGHT'S DISEASE.

Dr. W. H. White (*Hospitals-Tidende*, No. 44, 1894) is at variance with the accepted ideas of the ideal diet in chronic Bright's disease. He has made a series of experiments with regard to the solution of this question. Milk diet is generally advised, as it is thought to cause a decrease in the quantity of albumen excreted by the kidneys. He has found this far from true in his cases. As a rule, the albuminuria remains unaffected by any variety of diet, even with consumption of a large quantity of albumen. In those cases with a great amount of albumen in the urine this fact of itself is not of such importance as is generally considered. He has seen cases where the loss in albumen was less with a mixed diet than with one of milk and carbohydrates. The albuminuria is not the most important symptom and a treatment directed against this alone is faulty. Milk is said to be both easily digestible and diuretic. The former is not always the case, and as to the latter it is doubtful if diuretics will do good in this disease. Milk is also thought to favor elimination of the toxic substances, which is again doubtful. He has found a mixed diet to give the best results in practice. It did not produce uremia, the general condition and strength of the patient remained better and the circulation was stronger than with milk and carbohydrates. It strengthens the system against the loss of the albumen, as the ingested albumen covers this loss. Mixed diet is also better tolerated, gives rise to no disgust nor anorexia as the milk and carbohydrates sometimes do.

CHRONIC SCROFULOUS OTORRHŒA.

Dr. Isaia (*La Semaine Medicale*, No. 64, 1894) has obtained good results in the

chronic otorrhœa of scrofulous subjects with either of the following formulæ:

Balsam Peru.....	ää 10	o	ʒijss
Alcohol.....			
Muriate cocaine....	0.50–1	o	grs. vijss–xv
Balsam Peru.....	5	o	ʒij¼
Glycerine.....	10	o	ʒijss
Muriate cocaine....	0.5–1	o	grs. vijss–xv
Balsam Peru.....	ää 2	o	grs. xxx
Balsam tolu.....			
Alcohol.....	5.0–10	o	ʒij¼–ʒijss
Muriate cocaine....	1.0–2	o	grs. xv–xxx

Having previously cleansed the ear either with a solution of resorcine, boric acid or simple salt and water, the walls of the canal are anesthetized by a few drops of a solution of cocaine, after which a little of one of these solutions is instilled into the ear or it may be applied on a pledget of cotton. In nearly every case this treatment will give good results, but it is only indicated when the skin of the external ear and auditory canal are intact, for if it be excoriated the irritating qualities of the balsam might lead to painful inflammatory complications.

ALOPECIA AFTER ACUTE DISEASES.

Professor Kaposi (*Revista de Ciencias Medicas de Barcelona*, No. 16, 1894) in the treatment of falling out of the hair during convalescence of acute diseases, cachectic states, and women after confinement, recommends highly the following formula:

Alcohol.....	200	o	ʒvjss
Veratrine.....	o	50	grs. vijss
Tinct. benzoin	1	o	gtts. xv
Salicylic acid	o	50	grs. vjss

Apply locally.

Dr. Brocq (*ibid.*) advises the following in same condition:

Tinct. lemon peel.....	150	o	ʒiv¾
Hydrochloric acid.....	4	o	ʒj

Apply locally.

ELECTROLYSIS IN RODENT ULCER.

Dr. I. Parsons (*Norsk Magazin for Lægevidenskaben*, No. 11, 1894) has obtained very good results in rodent ulcer with electrolysis. It is not accompanied by hemorrhage and its action may be limited to the affected part, while the operation, which is done under anesthesia, is followed by no pain. Two needles are employed with a current of two to four hundred milliamperes with continuous alternation of the current. The resultant eschar will fall off in eight to ten days, the wound heals readily and a firm cicatrix results. In case of recurrence, repeat the operation.

TREATMENT OF EPITHELIOMA OF THE SKIN.

Dr. Darier (*Norsk Magazin for Lægevidenskaben*, No. 11, 1894) has treated with success five cases of cutaneous epithelioma in the following manner:

The crusts are removed by antiseptic poultices of potato starch boiled in a 1:1,000 solution of the bichloride and the ulcer is anesthetized with a ten per cent. solution of cocaine; then it is painted with the following:

Methyl-blue.....	1	o	grs xv
Alcohol.....	ää 5	o	ʒij¼
Glycerine.....			

All the blue-colored spots are then touched with a twenty per cent. solution of chromic acid, which changes the color to purplish-red; a second application of the methyl solution is again made. The ulcer is then covered with a sublimated dressing. This treatment is repeated four to five times, with intervals of two or three days, but the methyl-blue is only to be used as long as the new-formed skin takes up the coloring matter. This method is not painful and is very rapid in its results. In superficial epitheliomas from three weeks to two months are sufficient for a cure—about one month to the square centimeter. In deeper infiltrations one may also employ injections of the methyl-blue together with the local applications, but here chromic acid must be applied with great caution.

TREATMENT OF BURNS OF THE EYES BY AMMONIACAL VAPORS.

Dr. Trousseau (*La France Médicale*, No. 47, 1894) recently read a paper before the Medical Society of Paris on the effects of vapors of ammonia upon the eyes and their treatment. He divides the lesions into three degrees. These states are those caused by the vapors and not the entrance of the liquid into the eye. The effects of the first degree, hyperemia, photophobia and lachrymation, may persist for several days, and if somewhat advanced there may be swelling of the conjunctivæ, purulent secretion of more or less abundance which causes the lids to adhere; the cornea will be found intact. Compresses wet in tepid boric-acid solution and frequently renewed will bring about a restitution in a few days.

In the lesions of the second degree the condition is the same, with the formation

of eschars upon the conjunctivæ which render symblepharon prone to follow. This is best avoided as much as possible by frequent movements of the lids and the introduction, now and then, of a little vaseline between the lids. In the burns of the third degree the symptoms of irritation are much more pronounced. Even five or six days after the accident the conjunctivæ are reddened, violet-colored, œdematous and secrete muco-pus. Though the corneæ are apparently intact, one should not make too favorable a prognosis on account of the liability to symblepharon and the formation of corneal opacities. A deceptive amelioration may set in after a short time, to be followed by the appearance of milky white and complete opacity of the cornea. The eye may be seemingly intact for some time, while really it is severely affected. He warns against the danger of incautiously opening bottles of ammonia or of letting the vapors come into contact with the eyes.

TREATMENT OF LEUCEMIA.

Dr. Vehsemeyer (*Rivista Clinica e Terapeutica*, No. 10, 1894) thinks that all the remedies proposed in the treatment of leucemia are not only inactive but incapable of modifying, in the slightest manner, the course of the affection. He has found berberis vulgaris, either in fluid extract, pill or powder, to be a most excellent remedy in this disease. He calls attention to its elective action upon the intestine and the appetite. In one of his numerous cases where he tried this drug the results were truly marvelous. The patient, a young lady of a weakened appearance and of a delicate constitution who was affected with leucemia to an extreme degree, under the influence of this drug soon felt decidedly better, her appetite and intestinal functions greatly improved and the spleen decreased very much in size. This result was obtained without any particular attention being given to the diet, which, however, he thinks an important accessory. He advises an increase in carbohydrates in the dietary.

THE BISMUTH TREATMENT OF GASTRIC ULCER.

Dr. Savelieff (*Muenchener Medicinische Wochenschrift*, No. 45, 1894) reports from Professor Senator's clinic in Berlin that the treatment of gastric ulcer with the subnitrate of bismuth has given there excellent results. Ten grams (ʒijss) of the drug are taken at one time suspended in two hundred grams (℥vj ʒij) of water, and that portion of the subnitrate remaining in the upper portion of the œsophagus and mouth is washed down with a few swallows of water. If washing out the stomach is necessary, then this mixture is introduced through the stomach tube. A cure is generally obtained with the ingestion of two hundred grams of the drug. Immediately after taking it the patient is instructed to lie down for about an hour. In this position the ulcer is easily covered with the fluid, and still better if the hips be elevated about fifteen centimeters. Naturally the ordinary dietetic restrictions are to be followed. Nearly all the patients attended to their business during the treatment.

TREATMENT OF RECURRENT ECZEMA OF THE UPPER LIP.

Drs. Perrin and Aslanian (*La Semaine Medicale*, No. 64, 1894) in the management of recurrent eczema of the upper lip recommend cutting the mustache short and applying locally, several times a day, a supersaturated solution of boric acid in absolute alcohol. This will destroy the staphylococci aurei which they claim are normally present on the upper lip and around the nostrils, either alone or associated with other microbes, and which play so important a part in the production of eczema of the hairy portions of the body. Care should be taken not to take cold, as the consequent purulent discharge will aggravate the disease.

SMALL SON—Us boys is gettin' up a dog show, and I bet our Fido will take the prize. Father—Fido has no pedigree. Small Son—This isn't any European aristocracy affair. This is an American dog show.—*Street & Smith's Good News.*

"Is your daughter improving in her painting?" Mother—Well, I should say so. Her last picture was so good that only three of the family failed to guess what it was.—*Chicago Inter-Ocean.*

CORRESPONDENCE.

THE BOARD OF CHARITIES AND CORRECTION—OF MEDICINE.

EDITOR MEDICAL AND SURGICAL REPORTER—SIR:

The profession of Philadelphia by the action of the Board of Charities and Correction dismissing a conscientious, progressive and scientific physician from the staff of the Philadelphia Hospital, has received a shock which has shaken it throughout its entirety, which threatens the integrity of the conditions upon which its growth and development depend, and which calls for explanation and protest and for an effort to secure protection from a repetition of such a serious onslaught and from the chagrin and shame which must be suffered until the citizens of the Commonwealth understand and appreciate the principle threatened and the injustice and wrong perpetrated.

Tersely the procedure may be stated to be that for instituting means of determining an accurate diagnosis and employing instruments of precision essential thereto, a board, composed of four laymen and one physician, ignominiously discharged a physician from the staff and publicly censured and falsely charged him with criminally experimenting, permitting patients to suffer untreated in order to subserve some ulterior motive.

It is needless to unbury the history of the world's persecution of those who established truth and demonstrated principles underlying progress and development in every sphere of life, whether in religion or the sciences, but to direct attention to the fact that the same power of ignorance to-day occupies positions where the relationships are improper, and that the vital forces and principles upon which the advance and the conditions determining a nearer approach to the perfection of the art and science are in danger of serious injury. Inability to comprehend the discoveries of value with which vivisection supplies the profession explains the existence of that well-meaning but densely obtuse organization of sentimentalists known as the Anti-Vivisection Society; parallel ignorance is the soil from which anti-vaccinationists have sprung; small mentality gives us the mushroom growth of the "pathies" and the unfortunately ignorant or naturally stupid brethren who either can't or won't advance, and will, by reason of their deficiencies, cry out in opposition to progress and betterment, are the pitiable monuments to retrogression. To such, both lay and professional, it is time that processes of education and control be directed.

Misrepresentation is the invariable method of their obstructionist attacks, and indeed it cannot be otherwise, for to state a conclusion which is a misunderstood or uncomprehended truth is to falsify. A lie is modified truth. It is not intentional when the result of well-meaning ignorance, and this it is which renders it venomous, especially when emanating from one who in matters within the sphere of comprehension is recognized as honorable and truthful. Illustrations of the unintentional misrepresentations are had in the English Government, where honorable representatives, by proclaiming their convictions (misunderstandings), created such a sentiment that a law was enacted prohibiting vivisection, and thus was delivered a blow at the principles of progress which was of sufficient power to stop the wheels of knowledge in that direction for years. The investigation of the poison of venomous reptiles from which annually many thousands of English subjects die, having for its end the discovery of medicines that would avert the fatal consequences of snake-bite, was—think of it!—prohibited by law, and thus for years while a few animals were saved thousands of human lives were sacrificed. To the bulwark of American scientific medicine, the University of Pennsylvania, intelligent England turned for deliverance, and forwarded to us reptiles so that the investigations could be continued. The results more than justified and demonstrated the value of the application of the principle of progress and truth. Sunstroke, our summer destroyer, was not understood until Professor Wood a very few years since investigated its effects and discovered how

its fatal results were occasioned, and notwithstanding that annually lives are saved by the hundreds as the result of this scientific labor, the same evil spirit of misrepresentation periodically attempts to enact laws preventing similar scientific studies.

Does the profession prove true to its principles when it quietly submits to wounds inflicted upon any portion of its functional life without resentment? Is it to be subjected to dethronement by the authoritative power of ignorance because it does its duty properly and well? Are we to be persecuted because we employ means to determine correct diagnoses and establish proper methods of treatment? Are we to be subjected to mass opposition and misrepresentation on the part of the ignorant and rendered liable to damage suits because processes of advancement and betterment and a higher science are being practiced? Let us see to it that with the intelligent our cause is made known, and either deprive lay committees and boards of directors having supervision over medical institutions of their jurisdiction, or secure the establishment of such bodies composed of enlightened medical gentlemen who can understand the principles underlying the betterment and progress of the profession and who will earnestly advocate and secure upon a firm foundation the best conditions for the best ends.

The medico-legal bearing of the act of the Board of Charities and Correction recently chronicled is particularly striking. Suppose a peculiarity of a fracture could best be treated by the application of a modified dressing which would secure a more nearly perfect result than that which would follow the employment of an orthodox splint, and a slight degree of deformity still exist and the patient should institute a suit for damages. In the evidence would appear the fact that the orthodox dressing was substituted by a more desirable modification, and what would then be the position of the surgeon? If the jury were composed of such minds as characterizes the Board of Charities and Correction, it would be better to engage in some other vocation in life. Is the comparison not true? Unless Dr. Daland "feeds" quinine at once to a malarial case without first ascertaining the exact condition of the sufferer and definitely determining the degree of damage to the corpuscles and hæmoglobin, he is to be publicly censured and persecuted.

This, then, is the fact: no member of the staff of the Philadelphia Hospital dares to perform his duty as a scientific physician under the regulations of the Board of Charities and Correction as at present constituted without incurring the risk of public censure and dismissal. To the citizen who is taxed for the support of his unfortunate fellow-being and for the best interests of the afflicted the physician owes and—it may be said with pride—gives his best talents; and when the exercise of this is regulated or controlled by such conditions which, to the discredit and shame of this medical center, are permitted to exist at the Philadelphia Hospital, it is time to effect a change.

Truly, the board did not intend to act so reprehensibly and disgracefully; it simply did not know better, and they should therefore not be censured, but replaced by one that possesses the requisite intelligence necessary to enable it to comprehend, appreciate and aid the scientific and enlightened physician in the faithful discharge of his duty to the best interest of the institution and the best good of his patients. This can best be effected by the establishment of a medical board composed of medical gentlemen only and a business board composed of business men, each having jurisdiction only over its particular territory; and it is the duty of every member of the profession to do all in his power to accomplish this end.

Very truly,

H. Beates, M.D.

Philadelphia, Pa.

Victim—Ooo! Phew! You charge double price for this kind of a shampoo, don't you? Barber—Yes. Victim—So I thought. I notice that you are making me suffer twice as much.—*New York Weekly.*

Housekeeper—Those eggs you sold me were stale and I asked you for fresh-laid eggs. Dealer (patronizingly)—Those eggs are fresh, madam, not salted, and they are laid eggs, madam, not manufactured. Had you desired eggs recently taken from the nest you should have asked for freshly laid eggs.—*New York Weekly.*

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SATURDAY, DECEMBER 22, 1894.

EDITORIAL.

THE DETERMINATION OF SCIENTIFIC MEDICINE BY POLITICS.

The action of the Board of Charities and Correction in removing Dr. Judson Daland from the professional staff of the Philadelphia Hospital contained a genuine surprise for medical practitioners, if not for medical professors and politicians. It was not the gross injustice done an individual, nor the rebuke to conscientious performance of duty, nor yet the outrage to inoffensive efforts to advance humanitarian science, that distinguished the surprise. These items might provoke comment, but could scarcely cause amazement, for, unfortunately, they are of too frequent occurrence. It is a matter of common observation that individual qualifications and trained excellence carry no weight as compared with "influence" in formulating the decisions of bodies of professional philanthropists who are administering public trusts. The surprise in this instance is that the fiction is stranger than the fact. The reason assigned by the board for their unjustifiable action is a marvelous exhibition of novelty, simplicity and *naïvete*. It is novel, in that it is the first medical bull publicly made by the new faculty of municipal science; its simplicity is so unmarred by intellectual adornment that it reaches but a step from the sublime. Its *naïvete*, or knavery, is as patent as its simplicity. But this official dictum will relieve the public of speculating as to the significance of some matters which, presumably are merely coincidences. The members of the board have assigned a reason, and this must be accepted, for they are all honorable men.

If any should consider this reason too attenuated to stand unsupported, in justice to the Board of Charities and Correction they should bear in mind the fact that this is the first public appearance of that organization in the *rôle* of an authority in medical science, and furthermore that every-day familiarity with the wants of the needy and with the iniquities of the vicious enable them to take cognizance of influences which do not appear on the surface, and the revelation of which might prove detrimental to the public welfare. Similar instances are not unknown in other diplomatic circles. It violates no confidence to say the explanation offered is,

within our knowledge, the only ostensible reason.

From creditable information at hand the matter stands about as follows:

Dr. Daland is one of the hardest workers in the medical profession, most of his time being spent in original research. He has just finished his second year at the Philadelphia Hospital as a visiting physician. Since his election to the staff he has spent most of his time in the wards, frequently serving for other physicians in emergencies.

The terms of all the medical staff expire with the year. Usually they are all reëlected. When the board met recently the election was about the last thing done, and not a word was said about any change of any kind. Each member prepared his ballot and handed it in, and the result showed the reëlection of all the staff excepting Dr. Daland.

The board assigned as the reason for not reëlecting Dr. Daland that it objected to a certain kind of treatment which he used. It is alleged that while treating some patients who had malaria he did not give them quinine at a certain stage in the disease because he wished to take a few drops of the blood during the chill accompanying the complaint so that he might examine it with a view to advancing medical science.

The president of the board, asked why this action was taken, finally said: "Because the board preferred the other man. The board differed with Dr. Daland in a matter of treatment of patients; that is all. Personally I have the greatest regard for Dr. Daland. I admire him for his abilities and for the work he has done. But with other members of the board, I disagreed with him about certain matters of treatment, so I voted for the other man." Incidentally no complaint had been made by patients subjected to this inhuman barbarity.

Dr. James W. Walk, who was the only member to support Dr. Daland, is quoted as saying: "My position is this: The question of medical treatment in the hospital is a technical matter, and I do not think that laymen are competent to decide it. If the board has any objection to any method of treating patients, it ought to have a commission of physicians pass upon it. It doesn't seem to me to be in the sphere of the board. Dr. Daland has labored so faithfully and so well since he has been at the hospital that I did not think we ought to drop him because of treatment, the merit or demerit of which is a medical question."

Dr. Horatio C. Wood, who is accustomed to use plain terms when he unburdens his mind, in a public interview said, among other things:

"As a result of careful inquiry it was evident that the allegations made by the Board of Charities were not only untrue, but that at the time of the voting in the afternoon, if these gentlemen did not know that these allegations were untrue it was because they had failed to investigate. The patients were treated, though not with quinine. So that the Board of Charities has arrogated to itself the right to decide not only that no experiments shall be made in the hospital, but that a physician shall be removed because his treatment does not meet the approval of the Board of Charities.

"Allowing, however, for the moment, that in this arrogation of the Board of Charities it is acting wisely, it is plain that in removing Dr. Daland they acted unjustly in that they failed to notify the medical staff that they did not consider any of its members had the right to make any experimental studies in the hospital.

"The greatest danger that threatens the medical prestige of Philadelphia is, in the first place, because the medical laboratories are not supported by the people of the city; and in the second place, because

the Philadelphia City Hospital is administered in such a way as to make it almost impossible to use it for the increase of medical knowledge. It is not because there is lack of ability in Philadelphia or lack of men willing to make the personal sacrifice that we have to go abroad for our medical discoveries, but because the mayor habitually puts in charge of the Philadelphia Hospital and gives so much power in the hospital to them, men, honest that may be, but without natural force of intellect which will allow them to take broad views of important problems. It is perfectly true that no physician has the right, for the sake of furthering human knowledge, to endanger human life. But medicine is an experimental science, and can only grow by experiments and the experiment which is based upon rational groundwork and is carried out with care, does not endanger human life or human body integrity, is not only justifiable, but imperative. It was for spending his time, without hope of any direct personal reward, in such labor and in such a way that must lead to results, that the Board of Charities and Correction removed Dr. Daland, and in such a removal struck a great blow at the medical interests of the city and of the world."

Possibly the Board of Charities and Correction was panic-stricken at the thought of a visit from avenging zoöphilists with their formidable lachrymal engines run by sentimental accumulator cells. Certainly some powerful agency disturbed its equilibrium.

While THE REPORTER agrees with Professor Wood in his estimate of the effect upon medical Philadelphia resulting from the narrow policy obtaining in the management of municipal charities, it believes that there is another and even greater danger to medical prestige for which the profession itself is responsible and which permits of the existence of the conditions complained of. So long as medical opinion sanctions or even tolerates the existence of that form of multilocular (*multus*, many; *locus*, position) parasitism which monopolizes public appointments to the detriment of science and institutions alike, there can be little hope for satisfactory progress in scientific medical research.

While civil and medical politicians are playing into each other's hands, the pot must not call the kettle black.

ABSTRACTS.

THE INJUSTICE OF COMPETITIVE CHARITY.

Has the medical staff nothing to say as to unlimited endowing of free beds in enterprising hospitals, and the free treatment of anybody and everybody, upon payment of nothing or of some hypocritically small fee? Is this simply and solely a matter within the control of lay boards of trustees and of professional philanthropists? These questions are suggested by a widely distributed circular issued by a large hospital in a city of the eastern United States which reads as follows:

> The Board of Trustees of the —— Hospital of the city of —— strongly recommend the following advantages offered to the public.
>
> Mill and factory owners, lodges, and beneficial associations can secure a bed at the —— Hospital for 365 days by paying $200, and upon averaging the days may have several patients in the hospital at the same time.
>
> Subscription books can be obtained by working people of both sexes up to the

age of fifty, subject to the regulations of the hospital, whereby, on paying an initiation fee of one dollar and monthly installments of fifty cents, each subscriber may be treated in case of sickness entirely free of further charge. Heads of families and owners of factories should particularly recommend to their servants and employees to avail themselves of this excellent facility.

Of course, if the medical officers of this hospital have assented to this plan, nothing more in criticism can be said except to ask them:

1. Have you any right to assent to it for *other* physicians who in the course of human events may take your places by and by?

2. If all hospital staffs assent to it, have the non-hospital physicians no criticism to offer and no rights to be upheld?

3. Has the medical profession nothing to suggest as to the encouragement of pauperism and the just claim of members of the profession to some compensation for medical services from those able to pay? Has the public no duties to the medical profession in this debauching competition in "offering advantages to the public?"

4. By what principle of common justice and decency can it be claimed that well-to-do "workmen, lodges and beneficial associations" are unable to pay medical men something for their services, and that the professionally benevolent should dispose of medical service by virtue of being trustees of hospitals?

In England the impudence of these trustees and dictators of medical men has become a public calamity, and the same trend is more than evident here. Have medical societies and associations, colleges and academies of physicians, no word to utter as to the huge and growing abuse? Instead of permitting or encouraging, they should warm the endowers, supporters and trustees of hospitals and the easily deceived public that the blind sentimentalism of charity almost inevitably ends in wrong and ruin, and that whatever injures the medical profession in the long run injures the health and well-being of the general pubiic.

Not a dollar should be given to any hospital that is not accompanied by an express stipulation on the part of the giver, and by a promise as explicit on the part of trustees and officers, that no person (except in emergency cases, etc.) shall receive medical aid in the institution except it have been systematically and clearly made evident that such person is unable to pay anything for the service. Medical men are already overburdened with necessary or inevitable charity work in private, hospital and dispensary practice, but they display a criminal negligence as regards the increase of this evil of charity abuse, and either supinely submit to the dictatorship of mechanic routine or of trustees, and even go so far as enthusiasm in professional hari-kari. It is high time the brakes were applied.—*Med. News.*

THE "OYSTER EPIDEMIC" OF TYPHOID FEVER AT WESLEYAN UNIVERSITY.

H. W. Conn, Ph.D., professor of biology, Wesleyan University, Middletown, Conn., writes (*Med. Rec.*): While it has been for some time suspected that raw oysters may be a possible means of the distribution of germ diseases, there have been no cases where the theory has been positively demonstrated. The recent outbreak of typhoid at Wesleyan University is, in this respect, therefore, so unique as to be of especial interest, and for this reason the results of the investigation as to the cause of this outbreak are given below in some detail.

The history of the epidemic was as follows: About October 20th there began to appear among the students a number of cases of mild fever, which were for several days not regarded as serious. After about a week, however, one or two of them developed into typical typhoid fever, and several others were suspected of being of the same nature. For a week and a half following October 20th new cases appeared somewhat rapidly, and by November 1st there had appeared among the members of the college about 23 cases of fever of more or less prominent typhoid character. After November 1st the number of cases diminished, although 2 appeared on November 2d, 1 on November 5th, and 1 as late as November 9th. Subsequent to

that period on new cases have developed. There have been among the students about 26 cases of fever which have been, with more or less reason, regarded as typhoid. Of these 23 have been pronounced typhoid by the physicians in charge, while the others are of such a slight nature and have so few typhoid symptoms as to make it at least doubtful whether they were really typhoid fever. Of the cases of undoubted typhoid, 13 have been very serious and the others not very serious. Four deaths have occurred, and at the time of writing there are one or two other patients in a critical condition. It will be noticed from these facts that the outbreak of typhoid fever in college began about October 20th and the last case appeared about November 9th.

As soon as the serious nature of the disease was recognized an investigation as to its cause was begun. Of course, at that time it was not known that the disease would be limited to the dates above mentioned, and it was regarded as possible that there was in college a constant source of infection. The students that were sick were found to room in all of the college buildings and also in several houses in town. Moreover, it was seen that they did not board at the same boarding-place, and there appeared at first, therefore, to be no connection between them except the college campus. The first object of suspicion was the water from two wells at the back of the college buildings, which was used occasionally by the students of the college for drinking purposes. On this suspicion the use of the water was immediately stopped, and an examination of the wells was made. Chemical examination showed in one of the wells an exceptionally large amount of albuminoid ammonia. The examination was made immediately after a heavy rain following a long drought, which might possibly have accounted for this. A bacteriological examination was set on foot according to the method of Professor Vaughn. Bouillon cultures from the water of each well were made and cultivated for two days in a culture oven. Then 20 c.c. of the culture was inoculated into the abdominal cavity of white rats. The white rats, however, were entirely unaffected by the treatment, indicating plainly that pathogenic germs of a typhoid nature could not have been present. Moreover, a little inquiry showed that the wells could not have been the cause of the trouble. In the first place several of the students who were sick had certainly not drank from either of the wells. Secondly, the wells were used almost as much by certain young people from the town as by the students themselves, and there was no corresponding outbreak of typhoid in the city. In fact, Middletown, at the time, proved exceptionally free from all kinds of fevers. These facts taken together made it necessary to exclude the wells from the possible sources of infection.

It was noticed at the outset that the ladies of the college, about fifty in number, were exempted from the disease. This, of course, indicated that the cause of the infection could not have been in any unsanitary condition connected with the public college buildings in general, but must have been some source of infection to which the young men were exposed, and not the young ladies. After carefully looking over the facts it was further found that all of the cases of sickness, with three exceptions, occurred in three of the college fraternities. The men did not all room in the fraternity buildings, though most of them did board at the fraternity club houses. This localizing of the disease to three fraternities proved the first usable point of departure in the investigation.

In the college there are seven fraternities, and most of the college students board at the fraternity clubs. In the three fraternities afflicted there were about 100 students, and among the 100 students, as above stated, about 25 cases of typhoid developed. This is seen at once to be an extremely large proportion. It is usually supposed that some 10 to 15 per cent. of those exposed to typhoid take the disease, and here was a percentage at least twice that proportion. This large percentage indicated at once that there must have been some extremely virulent source of infection to which probably every member of the fraternities was subjected. In no other way could the large percentage of cases among the students be accounted for.

In the attempt to locate the source of the trouble in connection with the three fraternities, however, every source of possible contagion was investigated. The plumbing was examined, and though

found to be defective in at least one case, in the other houses it was in first-class condition. It was hardly possible to accuse the plumbing, however, inasmuch as the three clubs afflicted were situated at a distance of half a mile from each other and were connected with different sewers. The probability that these three houses should have been defective in their plumbing at the same time was very remote, and their connection with different sewers, together with the absence of typhoid in the city, made it impossible to accuse the plumbing. The possibility of transference of the disease from house to house was also considered, an attempt being made to find some early case which could possibly have been a source of infection to the other houses. But this proved futile. There were no early cases, for almost at once, upon October 20th, two or three cases developed simultaneously, and of course this made it impossible to explain the epidemic by personal contagion. It was found, moreover, that the students who were taken with the disease in many cases had no connection whatsoever with the other fraternity houses, either through their room-mates or otherwise. Another source of possible infection was suggested in a lot of new football suits which had recently been purchased, and which had been thought to have given rise to one or two cases of blood-poisoning. Inquiry, however, soon showed that most of the students who were sick had nothing to do with the football suits, and they were of necessity ruled out.

Naturally, one of the first objects of suspicion, after the disease had been located among the members of the three fraternities, was the table of the clubs. An examination was immediately made into the sources of supply of these three fraternities. All of them used the city water, which, of course, made it impossible to accuse the water as a source of the typhoid, there being no corresponding typhoid fever in town. The milk-supply of the three fraternities was also ruled out by several facts. The three fraternities were supplied by two different milkmen, and each of these milkmen supplied one or more of the other fraternities in college, as well as a large number of customers in town. Moreover, upon inquiry it was learned that these milkmen had not exchanged milk with each other, and that they lived at a distance of several miles from each other outside of the city. No cases of typhoid fever could be located in or near either of the milk-farms as having occurred within the last six months. It was, therefore, impossible to accuse the milk. In the same way all the other articles of food used by the fraternities were investigated, without success. The three fraternities did not have the same grocer, nor the same butcher, nor the same butter supply, nor did they obtain fruits from the same sources; and whenever, in regard to any article of food, it was found that there was a point of likeness between the three fraternities, it was found at once that the other fraternities in college shared with them in having the same source of supply. After carefully inquiring into every article of diet used on the ordinary table, it was found necessary to exclude the table as a source of infection. The attempt was then made to find some special, unusual article of food that had been used during the fall by the three fraternities, but it was impossible to do so.

When the dates of the outbreak above given are considered, it will be seen that they have themselves almost conclusively pointed to one single source of infection that had occurred in these three fraternities at a date something like two weeks earlier than October 20th. The period of incubation of typhoid fever is known to be from about eight days to about twenty-eight days, and all of the cases came in such close connection with each other as to indicate almost beyond question that they were due to one single source of infection, that occurred within two weeks prior to October 20th. On October 12th all of the fraternities in college held their annual initiation, followed by an initiation supper, and suspicion was soon thrown upon these suppers. The date of the suppers was exactly such as would be needed to explain the outbreak, and as soon as it appeared that new cases diminished after November 1st, these suppers became the most probable source of infection. When the initiation suppers were taken into consideration, one of the three exceptions above noticed disappeared, because one of the men who did not belong to the college fraternities had attended one of the three initiation suppers. An examination of the bills of fare at the sup-

pers in question was therefore instituted. It was found that nearly every article of food must be excluded, on the same grounds as the articles of food at their ordinary table. Their milk, their water, their ice, their ice cream, their fruits, their celery, and in fact nearly all other articles of diet, they either did not obtain from the same source, or obtained them from a source which supplied every other one of the seven college fraternities as well as the people in town. There was found, indeed, to be but four points of union between the three fraternities. One was the celery used in the salad, a second a small amount or fruit, a third some ham, and the fourth the oysters which were eaten. The celery, the ham and fruit, however, were from sources which supplied other clubs and a large part of the townspeople, and could, therefore, not have been the cause of the special infection confined to these three fraternities.

As soon, however, as it was found that the three fraternities each ate raw oysters from the same oyster dealer, the problems began, one after the other, to be solved. It was found that none of the other four fraternities ate these raw oysters. Two of them ate no oysters, a third ate oysters which, however, had been cooked, and the fourth obtained oysters from an entirely different source. Nor could it be learned that the lot of oysters had been used raw to any extent among the people in town, most people cooking their oysters. Another one of the above-mentioned exceptions was also explained at once, because the student, upon being questioned, stated that about the time of the initiation suppers he had eaten of the raw oysters in the store of the oyster dealer. The oysters in question were served at each fraternity on the half-shell, at the beginning of the supper, and it was, therefore, almost certain that nearly every person who attended the banquet ate of them. Correspondence and questioning, however, were immediately instituted, which resulted in tracing in this way a connection between every student who was suffering from typhoid and these oysters, with one doubtful exception of a student who has not yet been personally questioned. It was learned also that there were in attendance upon these three suppers, in addition to the students in the college, a considerable number of alumni from out of town and five students from Yale College. Letters were immediately written, therefore, to all of these persons to learn if they had eaten of the raw oysters, and whether they had suffered from any febrile disturbances. It must be remembered that the alumni were, as a rule, considerably older than the students, and it was, therefore, to be expected that the alumni would be more likely to be exempt from the disease than the students themselves. From twenty responses received from the alumni it was found, however, that there were two cases of genuine typhoid fever, which had developed simultaneously with those in the college, and that there were three other cases of sickness which had not been regarded as serious. These might or might not have had some connection with the banquet in question, though it is quite doubtful. Of the five students in Yale College, two were taken with typhoid symptoms at just four weeks after the banquet. Both of them developed into severe cases of typhoid fever. In regard to these two cases at Yale, it should, however, be noted that they appeared quite late, indeed four weeks after the supper had been held; and although four weeks is not too long a period of incubation to be possible, still it is unusual. They developed, however, at exactly the period that the last case in Wesleyan made its appearance. It is also a fact that there were two other cases of typhoid fever in Yale College that certainly had no connection with these banquets or these oysters, and it is therefore not certain that these two cases are to be attributed to these banquets. It is, however, a remarkable coincidence that of four cases of typhoid at Yale two should have been those who attended the banquet at Middletown and ate of the oysters in question, and that these two should have developed within the four weeks following the banquet. It is therefore at least probable that these cases were due to the same cause.

It will be seen that as soon as the oysters were accused of the trouble two of the three cases above mentioned of typhoid occurring outside the fraternities were at once explained. The fourth case remained isolated. This case was a member of the faculty, who had not attended either of the banquets. He was taken with a slight

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fever, and inasmuch as it appeared at about the same time with the students, it was regarded as identical with the other cases. It proved, however, a very slight fever, lasting only a few days, and it is therefore at least doubtful whether it was typhoid. Whether this person ate of the raw oysters cannot be positively determined. It is a fact that raw oysters were eaten at the table where he boarded at about the time of the banquet, but as yet no positive connection between the person and these oysters has been made out. Whether, therefore, this case is to be regarded as an isolated case of fever having no connection with the others and not strictly typhoid fever, or whether it is a fact that it is also explained by some connection with the infected oysters, has not been determined.

Inquiry was made at once as to the source of the oysters, and it was learned that while they had grown in the deep water of Long Island Sound, they had been deposited in the mouth of a fresh-water creek for a day or more to freshen. This freshening, as is well known, consists of the absorption by the oysters of fresh water, which causes them to swell up and become plump. These oysters had thus been "fattened" before being sent to Middletown. Further inquiry showed that, within about three hundred feet of the place where they had been deposited, was the outlet of a private sewer coming from a house wherein were two cases of typhoid fever. The persons in question were a lady and her daughter. They were taken sick at such a period as to call in a physician for the first time October 11th, which, of course, means that the disease had been in its period of incubation for probably considerably over a week earlier. The oysters were sent to Middletown on October 10th, and therefore they were deposited at this place in exactly the time to receive contamination during the early days of these two cases of typhoid. Of those two cases one proved extremely severe, and the lady died on October 21st. In the other case the fever, after running about five weeks, disappeared and convalescence set in. It is, of course, very easy to understand that the typhoid germs could have found entrance into the oysters from this source of contamination. Now, it has been known for some time, having been shown by Foster and Freytag, that the typhoid germs will live for a long time in sea-water or, indeed, in a concentrated salt solution. Specimens of the oysters from the creek, however, were put into the hands of Dr. Foote, of Yale College, who soon showed that if the typhoid germs were forced in between the two valves of the shell they would remain alive in the oyster for a time sufficient to enable the oyster to be carried to Middletown and to be used at the initiation banquets. Whether or not they will grow and multiply in oysters has not yet been positively determined.

Shortly after the oysters had been placed under suspicion it was learned that there were at Amherst College several cases of typhoid fever. Correspondence was instituted which resulted in showing that at Amherst there had been an initiation supper on the night of October 12th. Most of the cases of typhoid at Amherst occurred among the members of one fraternity, who, as at Wesleyan, neither roomed nor boarded together. They, however, had attended the initiation supper on October 12th, had eaten of raw oysters at the supper, and inquiry showed that these raw oysters also came from the same place as the Wesleyan oysters, and had been fattened in the mouth of the same creek. As at Wesleyan, certain wells were first placed under suspicion, but examination showed them to be good. While, of course, this did not conclusively demonstrate that the cases at Amherst were due to the same source of infection as that at Wesleyan, it rendered it at least probable.

The facts above related, it will be seen, point with conclusive force to the oysters as the cause of the typhoid outbreak. The dates of the outbreak, October 20th to November 8th, plainly point to one source of infection about October 12th. The fact that two cases of genuine typhoid developed at the same time among the alumni, and that two others appeared also among Yale students, none of whom have had connection with the three fraternities later than the initiation supper, or before that time, plainly demonstrates the initiation supper on October 12th as the time of the infection. At these initiation suppers only one article of food or drink was used which was not used by the other fraternities in college and by the

people in town in general. That one article of food, the raw oysters (not eaten raw by people in town in general), was learned to come from a place where it was certainly subjected to a probable contamination of typhoid fever from two severe cases of the disease. The use of raw oysters from the same locality elsewhere has been found, at least in one case, to have been followed by a similar outbreak as occurred in Wesleyan. These facts taken together leave no possible doubt that the Wesleyan typhoid fever was caused by the oysters in question.

It must not, however, be inferred that because the lot of oysters supplied at these initiation suppers was infected, therefore that all the oysters from the same locality would be thus infected. The public press has certainly exaggerated the condition of affairs. The oysters from the same locality were widely used in Connecticut, and doubtless in many cases have been eaten uncooked. There has been, it is true, quite a little typhoid fever in Connecticut during the past month, but it has not been possible thus far to trace very much of it to the eating of raw oysters. The probability is that the oysters fattening in the locality in question would not, as a rule, be contaminated, but that it would only be an exceptional condition that would produce the result. It would be necessary that they should be lying in this place at just the period when the typhoid germs were swept by the currents or eddies from the sewer over the oyster-bed; and such a condition, even though there might be continued cases of typhoid in the course of the sewer, would doubtless not by any means be a constant one. Oysters, as a rule, are said to open their shells on flood-tide rather than ebb-tide, and this would, of course, make it more difficult for them to be contaminated by sewage from sewers above them on the creek. While this would by no means make the chance of contamination impossible, it would certainly render it less. It is not to be supposed, therefore, that the oysters deposited in the creek for fattening would all, or indeed many of them, become contaminated by the typhoid material, but that only exceptional conditions would produce the result. Where a private sewer containing typhoid excreta opens in the vicinity of such an oyster-bed, the danger must certainly be considerable. Where the typhoid material is mixed in the city sewers with the large amount of sewage and is subsequently diffused through a considerable body of salt water when the sewer empties into the sea, the danger of oyster contamination must be considerably less. But there must be danger to public health from oysters fattened in any fresh water in the vicinity of sewage.

Doubtless many cases of mysterious typhoid have been due to such a cause. To trace these cases is a matter of extreme difficulty. The peculiar conditions which have occurred here have been such, however, as to bring the matter into clear light, and to throw with certainty blame of typhoid distribution upon a source which has for some time been suspected, but not demonstrated. That the practice of fattening oysters in the mouth of rivers and in the vicinity of sewers is dangerous to the public health, is beyond question shown by the combination of conditions which have made it possible to trace the Wesleyan typhoid outbreak to the eating of a lot of infected raw oysters.

Hopeful.

"How is your son getting along in college?" asked Farmer Corntossel's neighbor.

"Purty well in some ways. I don't know how he's doin' in his studies. But from his last photograph I jedge he's discovered a hair tonic thet'll make his fortune."—*Washington Star.*

WATTS—Tebson must be awfully afraid of his wife. He is always telling us how she will give him fits if he don't hurry home. Potts—That's the best sign in the world that he is not afraid of her at all. The man who is bossed by his wife never says a word about it.—*Indianapolis Journal.*

AN eminent physiologist declares that the best remedy for indigestion is to whistle for a half-hour after a meal. Most of those who whistle for their dinner never get indigestion from overeating.

"JACKSON tells me the last thing he wrote was accepted. Do you know what it was?" "Yes, his resignation."—*Tit-Bits.*

CURRENT LITERATURE REVIEWED.

IN CHARGE OF ELLISON J. MORRIS, M.D., AND SAMUEL M. WILSON, M.D.

THE AMERICAN JOURNAL OF OBSTETRICS for November.

Inflammatory Disease of the Uterus and Appendages and of the Pelvic Peritoneum

is the subject of a series of papers by well-known operators. These papers were read in a discussion before the American Association of Obstetricians and Gynecologists, at Toronto, September 20, 1894, the introductory remarks on the subject being furnished by William Warren Potter, M.D., of Buffalo, N. Y. In this paper the author reviews the history of the knowledge of inflammatory disease in the pelvis and urges that the profession be not deceived by the so-called conservative teaching of the present day which would leave organs that have ceased to perform their physiological functions and have become a menace to the woman's well being.

The clinical history of the disease is well pictured by Charles A. L. Reed, M.D., of Cincinnati, Ohio; while the causation and pathology falls to the share of L. S. McMurtry, M.D., of Louisville, Ky. Pelvic inflammation originates, he says, practically without exception, from septic infection. This may be specific or traumatic, including among traumatic causes the wounds of childbearing and abortion. Puerperal infection exceeds all other etiological factors in this disease. There is abundant evidence that many puerperal women are infected with gonorrhœa and that both the puerperal and specific causes may coexist in the same individual. A different class of traumatic infection is that of certain surgical operations and manipulations upon the uterus. Such are the injury and contamination of sponge tents, of steel dilators, and operations upon the cervix and within the uterine cavity. It is not the traumatism *per se* which begets the inflammatory process; it is the admission of septic material. The inflammation is prevented by a healthy, clean mucous membrane and a proper aseptic condition of instruments.

The se ction on diagnosis and prognosis is contributed by J. F. W. Ross, M.D., of Toronto, Can. He admits that the diagnosis of the cases in which there is but little to be felt in the pelvis is difficult, and such cases are likely to be mistaken for cases of so called ovaritis and for cases in which the ovaries are tender owing to some anemic or other condition of the system. Neurotic women and anemic girls frequently suffer from this ovarian tenderness. Such tenderness exists without the presence of any actual disease, and these cases should never be operated upon. If they are observed closely for a time no acceleration of pulse or rise in temperature will be noticed. The pus tube may be mistaken for a fibroid, as has happened to the author himself. During the development of pus tubes patients are usually supposed to be suffering from typhoid or malarial fever. The diagnosis in such cases should be made by the expert finger in the vagina. This shows the importance of the vaginal examination in all cases of prolonged fever. While many cases of disease of the uterus and appendages do get well without operative interference, in those cases that suffer from relapses nothing will relieve them but the removal of the tubes and ovaries. In cases suffering from large pus tubes cure is dependent on the removal of such tubes. The drainage of pus tubes the author regards as bad practice. What applies to the pus tubes applies equally well to the septic hematoma of the ovary and ovarian abscess. The author asserts that for pus tubes interfering with health and causing recurrent attacks of inflammation there is but one treatment, namely, removal by surgical means, and the patients do not become unsexed.

When inflammation of the uterine appendages kills it does so for want of operation, but it kills slowly and before producing death causes an enormous amount of suffering. A condition of chronic septicemia sets in, the patient becomes emaciated and confined to bed, bedsores form and she slowly but surely dies.

The subject of treatment is discussed by Marcus Rosenwasser, M.D., of Cleveland, Ohio. This he divides into the treatment of acute and chronic peritonitis, medical and surgical. The removal of the immediate cause, the cleansing of the parts, free purgation, rest in the horizontal position, with hot fomentation or ice-bag to the hypogastrium, are the essential features of the medical treatment of acute peritonitis. Stimulants and strychnia may be needed if the pulse is rapid and weak. Some cases, especially neurotics, require opiates from time to time for the relief of pain, which are best given by suppository or subcutaneously. Opiates should be used sparingly and should be early discontinued. Hot vaginal douches may be used if well borne, not otherwise. Small blisters to the inguinal regions are of no value. Frequent repetition of saline laxatives is followed by relief of pain. The bromides serve a good purpose in allaying reflex nervous manifestations. The giving of iodides and mercurials with the idea of dissolving exudates is decidedly wrong, since the plastic material is thrown out by nature as a bulwark against general peritoneal invasion.

In regard to the surgical treatment, curetting and free drainage of the uterine cavity before infection has spread to the tubes or beyond will in many cases limit or abort the inflammation within the uterus. But when the appendages have been drawn into the inflamed area, the procedure is of questionable utility and is often harmful.

Abdominal section is called for when symptoms point to the formation of abscess either within a pelvic organ or within a circumscribed space in the pelvic cavity. Should such abscess rupture, section is indicated if it can be performed immediately or within the first few hours before general inflammation has developed. In the latter event the results are not encouraging. After general peritonitis has set in, with a small and rapid pulse, vomiting and increasing tympanites, the author inclines to active stimulation and the pushing of strychina to the point of toleration rather than operative interference.

In the chronic pelvic peritonitis the medical treatment consists in rest in bed with attention to the bowels, to feeding and to hygiene. Boroglyceride or ichthyol tampons of lamb's wool, by supporting the pelvic diaphragm and depleting the blood-vessels, hasten recovery in some cases. Gentle pelvic massage may be of value in softening adhesions and may thus aid in the reposition of fixed organs. Local electricity may be of temporary benefit. As a resolvent of exudates it has proven a failure in the author's hands after repeated and patient trial.

While curetting, when carefully done, may be of benefit in some cases, abdominal section is the recognized surgical treatment for suppurating appendages. The uterus should be removed if it is also infected or honeycombed with pus. The sinuses and fistulæ that remain after the discharge of so-called pelvic abscesses and resist efforts to cure by drainage and injection of irritants may be cured by removing the cause, located in the remnants of suppurating tube and ovary.

The treatment of inflammation of the uterus and appendages is also discussed by A. Vander Veer, M.D., of Albany, N. Y., who agrees very closely with Dr Rosenwasser. J. Henry Carstens, M.D., of Detroit, Mich., contributes further remarks on the treatment, and urges that a microscopical examination be made in every case of leucorrhœa with burning micturition of sudden onset, to determine whether of gonorrhœal origin or not. If gonorrhœal, it should be treated not by douches but by thoroughly cleaning out the vagina, the uterus and cervix and applying iodine, corrosive sublimate and other germicides thoroughly and effectively.

After abortion the author believes in cleaning out the cavity of the uterus with a dull curette and applying pure carbolic acid. The author sums up his paper as follows:

1. Let the general practitioner most conscientiously and carefully treat gonorrhœal infection in women.

2. Let the family physician and obstetrician most carefully manage confinements aseptically, and in the treatment of miscarriages be most thorough and not trust the *vis medicatrix naturæ*, but carefully clean out the uterine cavity.

3. Girls or young women who have leucorrhœa and pelvic pain, the result of accident or not, should be most carefully and early treated before mischief has been done.

4 In cases of acute inflammation judge each case by itself. If the symptoms are mild palliative treatment with absolute rest will be proper, and an operation can be performed later.

5. Cases of six or eight weeks' standing with sepsis should be operated on promptly.

6. When operating try and remove all diseased tissues if you expect your patients to get well promptly and perfectly. If you cannot and a second operation is necessary, tell your patient or the friends immediately, otherwise you will bring abdominal surgery into bad repute.

The remaining paper of the group, "Various Modes of Treatment," by Joseph Price, M.D., of Philadelphia, appeared in the issue of THE MEDICAL AND SURGICAL REPORTER for November 24th, page 709.

Francis Foerster, M.D., Professor of the Diseases of Women to the New York Post-Graduate Medical School and Hospital, etc., continues his articles on the

Comparative Microscopical Studies of the Ovary,

this paper being concerned with the stroma of the ovary. As the result of his studies he lays down the following corollaries:

1. In accord with W. His and others, the ovary must be considered an erectile organ in whose cortex the smooth muscle fibers largely predominate over the connective tissue.

2. The medulla of the ovary is mainly composed of fibrous connective tissue holding comparatively few bundles of smooth muscle fibers.

3. In the cortex of the human ovary the bundles of smooth muscle fibers interlace in an almost vertical sagittal and frontal direction.

4. In the cortex of the ovary of the guinea-pig the smooth muscles exhibit a plexiform arrangement, also to be seen in the ovary of the cat and ewe.

5. The arteries of the medulla of the human ovary have a markedly tortuous course. Their muscle coat is liable to a hyaline infiltration and to endarteritis obliterans.

6. In the medulla of the ovary of the cow, the ewe and the sow peculiar vascular tufts are invariably met with, consisting of arteries, veins and capillaries whose walls are changed into myxomatous tissue.

7. Within such vascular tufts almost always an effusion of serum or lymph is met with, often to a considerable extent. These effusions are probably due to a rupture of lymphatics occurring by the methods of slaughtering the animals.

8. The arteries, and probably also the veins, in the medulla of the ovary of the cow, ewe and sow are frequently found changed to a myxomatous tissue either holding trabeculæ of muscle fibers or consisting of purely myxomatous tissue. This change not infrequently leads to an obliteration of the blood-vessels named.

J. F. W. Ross, M.D., of Toronto, Can., contributes an article entitled

Personal Experience With Pus Tubes.

He states that he has met with four varie-

ties, namely, intratubal abscess, intraovarian abscess, intraligamentous abscess, and extraperitoneal abscess (that is, an abscess entirely outside the tissues forming the pelvic contents). The latter variety may be cured by puncture and drainage. The third variety, or intraligamentous abscess, must be opened and drained, but if accompanied by a pus tube that is not removed the abscess may remain uncured until the pus tube is removed. The second variety will occasionally cure itself by perforating downward and discharging its contents, but the patient will not remain well while the contracted and disorganized ovary is left in situ. The intratubal abscess should always be treated by removal of the tube.

In looking back over his records, the author finds that the fatal cases were chiefly those in which gonorrhœa was contracted but a short time previous to operation, and he believes that it is not wise to operate on these cases too soon after the primary infection. It is better to wait till the pus has become to a certain extent sterile and until the poisonous germ has become attenuated. The author is also firmly convinced that none but those who have had the advantage of a special training in this department of surgery should undertake the operations for the relief of the cases under discussion.

The author is a firm believer in the efficacy of the drainage tube, and it is his practice to leave it in for a period of about eight days, at the end of which time it is replaced by a rubber tube. He thinks that the danger of infection of the peritoneum through the drainage tube is a myth if the tube is properly cared for. Moreover, he does not think that the recent suggestions to examine the pus from a pus tube or suppurating ovary microscopically and judge from the result of the necessity for drainage is practicable in the work of a majority of operators, and he therefore thinks it best to adopt drainage in all doubtful cases.

Flushing, to be of any service, must be thorough, and a large quantity of water must be used. Such a stream of water should be used as will float out clots and pieces of *debris* as well as remove pus.

The ligation of the pedicle is a matter of great importance, and the author does not approve of curetting the stump of the tube to remove all diseased tissues. By so doing the stump is made conical and there is greater opportunity for the ligature to slip. The tissue of a pus tube, like the tissue of a fibroid, has a tendency to shrink; the ligatures should therefore be applied very tightly.

The author suggests that a drainage tube be passed into the bottom of the pelvis during the interval of time that is occupied by passing the sutures, as in this way the amount of hemorrhage can be determined and steps taken to arrest it if excessive.

Appended to the paper is a table of the results of seventy-four operations.

The Present Status of the Treatment of Pelvic Inflammation

is the title of a paper by Walter B. Dorsett, M.D., Professor of Obstetrics, Beaumont Hospital Medical College, St. Louis, Mo. The following are his deductions, which are in marked contrast to the opinions of the writer of the previous article:

1. Pus in quantities is hard to deal with down in the pelvis in laparotomy cases, and if possible should be evacuated prior to taking out the tubes and ovaries, either through the *cul-de-sac* of Douglas or, if between the layers of the broad ligament at the side of the uterus, do your laparotomy at some future time.

2. Pus sacs in the tube near the uterine end of the tube can be evacuated through the uterus by packing the horn.

3. Parametritis, or cellulitis of the ancients, is, except in rare instances, a secondary trouble, due to a foul uterine cavity. Clean out the cavity and stop the source of poin poison, and you do the best thing possible to be done.

The remaining papers in this issue are "Total Extirpation by the Vagina for Lesions of the Uterine Appendages," by Charles Jacobs, M.D., of Brussels, Belgium, in which the procedure is strongly advocated; "Treatment of Distention of the Fallopian Tubes without Laparotomy and Removal," by Frank A. Glascow, A.B., M.D., Professor of Clinical Gynecology, St. Louis Medical College, in which the author advises dilatation of the uterus (by means of sterilized slippery-elm tents) which is kept up for several days, at the end of which time there is usually a discharge of pus and relief of symptoms. If, when the uterine canal is large enough to admit the finger, there is no discharge of pus, the author anesthetizes the patient and curettes the uterus. The author reports two cases relieved in this manner and one in which relief did not follow and where he was obliged to open the abscess, which was in the ligament.

Chloral Hydrate for Scarlet Fever.

Dr. James C. Wilson, in a paper read before the Pan-American Medical Congress, gave as his experience that chloral in doses of two or three grains in a teaspoonful of sirup every three or four hours exercises a powerful influence in this disease. Given thus it is to a high degree diuretic, controls the nervous symptoms, and to some extent antiseptic and tends to diminish blood pressure and lower the temperature. He has employed it for over ten years with more satisfactory results than from any other method of treatment.—*Phila. Polyclinic.*

Permanganate of Potash as an Antidote to the Cyanides.

Dr. J. V. Kossa, from experiments on animals, claims that the permanganate of potash is an efficient antidote to hydrocianic acid and the cyanides. A dose of over ten times greater than the fatal one was given to rabbits and immediately followed by the permanganate; no symptoms of poisoning followed. The potash salt oxidizes the poisonous compounds into innocuous preparations

PERISCOPE.

IN CHARGE OF WM. E. PARKE, A.M., M.D.

MEDICINE.

Value of Opium in the Laryngeal Stenoses of Children.

Dr. Carl Stern (*Ther. Monat.*) recalls the well-known fact that the difficulty in breathing in stenosis of the larynx in children is greatly aggravated by sleeplessness and fright. For this reason he has been led to treat these cases with opium, and his results have been so gratifying that he believes the remedy should receive more extensive employment. He uses it in cases—whether in diphtheria or without existing throat affection—in which the hoarseness, the barking cough, the stridor, the cyanosis, and finally the sucking in of the xiphoid process and lateral portions of the thorax point unmistakably to stenosis of the larynx. He reports several cases in which the use of opium averted an apparently necessary tracheotomy. Stern gives from two to five drops of the tincture of opium, according to the age of the child and the intensity of the symptoms, the dose being renewed according to the result obtained.

Relapses in Typhoid Fever.

Dr. Hugh U. Stewart contributes an instructive paper on this subject to the *Practitioner*. The writer defines a relapse as a second attack of typhoid fever, with a repetition of all the phenomena of the first illness, occurring in a patient who has become or is just becoming convalescent from the primary attack. The clinical history of 50 consecutive cases collected from the records of Guy's Hospital showed that men were especially liable to relapses, 31 of the patients being males and only 19 females. Age appears to have no special influence, relapses simply occurring most often at that period of life at which typhoid fever is most common.

The interval of apyrexia between the primary attack and the relapse was, in the majority of cases, from five to eight days; but it may vary from one up to twenty-four days. In cases in which there were two relapses, the usual interval between the first and second relapse was at least double that between the first attack and the first relapse. The relapse is nearly always of shorter duration than the primary attack; and in cases with two relapses the second was never as long as the first.

Perhaps the most important clinical feature in these cases was the state of the bowels. Constipation was present in 62 per cent., the bowels were regular in 20 per cent., leaving only 18 per cent. in which there was more or less diarrhœa. These figures seem to justify the view that constipation has an important relation to the occurrence of relapses.

In order to study the pathology of relapses, Dr. Stewart collected 40 fatal cases from various sources. These cases show, without a doubt, that there is an important difference in the seat of ulceration in primary attacks and in relapses. In 34 of these 40 cases, or 85 per cent., the large intestine contained recent ulcers and the small intestine contained healed ulcers; while in 65 cases of single attacks collected for comparison, 48, or 75 per cent, had the large intestine quite healthy, but the small intestine showed recent ulcerations. The author therefore holds that a relapse is due to a reinfection of the large intestine by sloughs derived from some part of the small intestine above.

It is generally agreed that a fatal termination to a relapse of typhoid fever is very rare. This is easily explained, according to Dr. Stewart, when we remember, first, that the relapse, owing to the acquired partial immunity, is not so severe as the primary attack, and, secondly, that the large intestine, which is the chief seat of ulceration in relapse, is thicker than the small. Thus the very important danger of perforation is to a large extent removed in a relapse, and we find accordingly that the prognosis, far from being worse, is considerably better than that of a single attack.

Medical Antisepsis.

M. Petresco, of Bucharest (*Gaz. des Hop.*), reports results which he has obtained by medical antisepsis which he has largely used as a therapeutic measure. He has employed nearly all the antiseptics in use. His conclusions are as follows:

1. A local medical or general antisepsis at a distance on the histological elements and on the pathogenic germs or on their toxines can be obtained which is analogous to local surgical antisepsis.

2. There are several chemical substances (fixed or volatile) which upon absorption can, even in remote parts, kill or attenuate certain pathogenic micro-organisms.

3. There are some medicaments which neutralize or modify chemically the toxines of pathogenic germs.

4. The best therapeutic agents to produce medical antisepsis are the products, more or less condensed, of the aromatic series, such as the essences. The essences are the antiseptics *par excellence* as much in medicine as in surgery. It is by the essences or their vapors that impregnation is obtained, a modification, more or less profound, of the organism, and in consequence a medical immunity. There is created a medical sterilization of the interior tissues analogous to the sterilization *in vitro* in a culture. By this sterilization or antisepsis of the interior microbe or ptomaine, auto-intoxication is prevented in sufferers from contagious diseases.

5. Medical antisepsis should be utilized in nearly all internal diseases of a microbic nature, as it has been utilized in the external parasitic diseases.

6. To establish the basis of medical antisepsis we must have a therapeusis which will act as a microbocide or destroy toxines or ptomaines.

A Cause for Baldness.

Dyspepsia is not only one of the most common diseases, but it is also one of the most common causes for the loss of hair. Nature is very careful to guard and protect and supply the vital organs with the proper amount of nutriment, but when she cannot command a sufficient quantity of blood supply for all the organs she very naturally cuts off the supply of parts the least vital, like the hair and nails, so that the most important organs, like the heart, lungs, etc., may be better nourished and perform their work more satisfactory. In cases of severe fevers one can readily see how nature economizes. If one will examine a hair very closely from the beard or head it will be seen that it gives somewhat of a history of an individual during the time it was growing. It will be observed that it shows attenuated places, showing that at some period of its growth the blood supply was deficient from overwork, anxiety or under-feeding. Speaking of dyspepsia being one of the most common causes of alopecia, I will add that a very common cause of indigestion is irregularity of meal-hours. The human system seems to form habits, and it performs its functions to a great measure in accordance with the habits formed. This seems to be particularly so in regard to eating, and you might say drinking too. Your stomach gets into the habit of accepting your meals at a certain hour every day, and at that hour it is ready for it. If you, however, take meals at irregular hours you take your stomach by surprise, and it does not know when to expect a meal, and it is not in that state of readiness for prompt and perfect performance of its work. Be more careful about what you eat, when you eat it, and you will have less dyspepsia and fewer bald heads.—*Ed. Charlotte Med. Jour.*

Malignant Lentigo in the Aged.

Hutchinson describes a singular affection, malignant lentigo, which begins as a brownish or black spot and which ends in the production of malignant tumor. The disease begins spontaneously or follows a lesion of the skin. In the four cases reported by Dubreuihl it was situated on the left side at the upper part of the cheek, on the eyelid, or even on the conjunctiva.

It occurs as a simple pigmentation without projection or thickening of the skin, and forms an irregular spot varying from sepia brown to black in color. It persists for ten to twenty years, remaining absolutely stationary or varying in tint, extent, sometimes disappearing, leaving the skin absolutely normal. At a given moment there appears on the spot or in its vicinity a malignant, ulcerating tumor, vegetating, bleeding, rapidly increasing in size—sometimes melanotic. It is recurrent, either at the same place or in the ganglions, presenting at each recurrence more malignancy and becoming melanotic. Histologically it resembles melanotic cancer, built up of large epithelioid cells, loosely connected, without stroma, and infiltrating its surroundings.—*Times and Register.*

Ringworm of the Scalp.

Hartzell (*Arch. of Ped.*) has the hair cut short and the following ointment rubbed into the diseased portions of the scalp once a day with considerable friction; Beta naphthol, 1 dram; petrolatum, 7 drams. In addition, the entire scalp is thoroughly washed every second day with hot water and a superfatted soap containing sulphur and salycilic acid. Unless the applications are well rubbed in to the hair follicles good results are not to be hoped for, and the treatment should be continued some time after apparent recovery.

Strychnia in Obstetrics Practice.

Duff (*Jour. of the Am. Med. Ass'n*) advises the use of strychnia in doses of one-sixtieth to one-thirtieth of a grain three times daily during the latter part of pregnancy, and believes by following this practice that the indications for instrumental delivery are less frequent, and ergot will only occasionally be called for during or after the third stage of labor. He does not offer this as a routine treatment, but as indicated in a large number of cases.

Apomorphine as an Expectorant.

Carmichael (*Cin. Lancet-Clinic*) says of this drug: "As an expectorant, in doses ranging from one-twentieth to one-sixtieth of a grain, great relief may be obtained in cases of bronchitis, trachitis and catarrhal pneumonia. From the fact that it produces emesis by its action through the spinal nerve centers, and not by irritation of the mucous membrane, it is a preferable remedy where we have inflammatory conditions of the stomach and emetics are indicated."

Whooping-Cough Cut Short.

The *Illustrated Medical Journal* says Dr. Moncoro treats pertussis with a 10 per cent. solution of resorcin, applying the solution every two hours to periglotteal region with a brush. Application is made four or five times at each sitting. The theory is that the disease is due to micro-organisms and affects primarily the larynx. Cultures of the micro-organisms have been destroyed by the smallest amount of resorcin.

Cold Water as an Antipyretic.

Dr. Fisher has arrived at the following conclusions:

1. That cold water is the best antipyretic used to-day.

2. That it is easily obtainable and is therefore adapted to all classes of cases, both rich and poor.
3. The mode of application is so simple that it adapts itself to the hospital and equally as well to private practice, and can be applied without any distinct training.
4. Cautiously given it stimulates.
5. Carelessly used and longer than required it depresses and will produce subnormal temperature.
6. That rectal temperature should be taken and the bath at once discontinued when temperature falls to 101°, as it will then continue to fall.
7. That a stimulant administered before the bath may be necessary and should be given where there is a feeble heart.
8. That the temperature indicates when to commence and when also to discontinue the hydropathic treatment.
9. Unnecessary blanketing after a bath is injurious and will produce copious perspiration, which I believe weakens the patient.
10. The temperature of the room should always be between 68° and 72°.—*Post-Graduate.*

The Cold Poultice as an Antipyretic in High Grades of Fever.

Bedford Brown, of Alexandria, Va., has used the cold poultice in his practice for the past fifteen years, with much satisfaction to himself and infinite comfort to his patients. He finds it to possess many advantages over the coal-tar antipyretics, as it never depresses the action of the heart or nervous system, but accomplishes its work speedily, easily, pleasantly, with comfort to the patient. His method of preparing the poultice is as follows: A sufficient quantity of flaxseed meal to prepare a poultice of suitable dimensions is placed in a common earthen bowl, and over this is poured boiling water, while the meal is constantly stirred with a large spoon until cooked to the consistency of soft mush. This material is then spread on a piece of soft cotton cloth, for an adult, about eighteen inches long and twelve or fourteen wide, or sufficiently long to cover the entire abdomen from the pubis upward, extending at least over half of the chest, well over the cardiac region, so as to fully cover the heart and half of the chest. This poultice is now covered with another piece of cotton of corresponding dimensions. After being spread and covered, the entire surface to be applied to the person is frequently besprinkled with ice-water until its temperature goes down to 68° or 70° F. (20° or 21.1° C.), when it is ready for application. At this point I would suggest that the poultice be not spread too thick, as in that case it would prove oppressive to the patient. The poultice thus prepared is applied over the chest from above the cardiac region to the pubis. In pneumonia of violent type, with an unyielding temperature of 104° or 105° F. (40° or 40.6° C.), frequent, hard, wiry pulse, great frequency and oppression of respiration, Dr. Brown has seen a cold poultice applied over the entire chest, extending back well over the sides, accomplish more in the reduction of temperature, of frequency of cardiac action and respiration, than all other local agents combined. If necessary the poultice should be renewed until the temperature falls to normal.—*Virginia Med. Monthly.*

A Case of Leucocythæmia Apparently Cured by Bone-Marrow.

Dr. W. G. Bigger reports a lad, aged twelve years, who for the previous six years had been under observation, suffering from splenic enlargement with anæmic symptoms, but who had previously been much relieved by treatment with arsenic and iron. Two months ago the disease acquired a more active character. The spleen became much larger and completely filled the left half of the abdomen, while at the same time there were diarrhœa, pyrexia and frequent attacks of epistaxis. He was now fed on raw bone-marrow spread on thin slices of bread. Under this treatment the improvement in the boy's condition, after the first week, was marvelous. The spleen diminished in size and the anæmia rapidly decreased. After a month's treatment the boy was reported as being better than ever before, while the spleen had receded and was at that time only felt about three inches below the ribs.

Treatment of Apparent Death by Rhythmical Traction Upon the Tongue.

The first case in which rhythmical traction of the tongue was employed at Paris to produce artificial respiration was by M. Lapicida (*La Tribune Medicale*), aided by a student.

A young woman, wishing to commit suicide, sprang into the Seine. She was seen by two sailors, who went to her rescue; after remaining for five minutes submerged, she was finally withdrawn from the river. Taken at once to the station, frictions were applied, but without success, when M. Lapicida, following the method of Laborde, began rhythmical tractions of the tongue.

At the end of five minutes a slight blowing sound was heard and respirations were established. At the same time the patient experienced a nervous crisis and objected to being resuscitated. She was placed in bed and enveloped in warm clothing. A few moments afterward she vomited freely and all danger was over.

Lapicida, who is chief of the post of the life-saving society, expressed himself as amazed at the rapidity with which the respiratory functions were restored, and resolved to employ this method in all cases which came under his care in the future.

Notices detailing the method of Laborde have been placed in the life-saving stations throughout Paris.

The Treatment of Tapeworm.

Dr. Leslie Ogilvie attributes the frequent failures in the attempt to remove a tapeworm

to a lack of attention to details in the administration of the drug used. When the purgative is given soon after the anthelmintic the worm is carried away, all but the head. In such cases it is useless to repeat the drug, as is frequently done, in a short time, as the worm offers but scanty absorbing surface and the chief effect of the drug is to poison the patient. Neither does he consider castor oil a suitable purgative to give before the administration of the anthelmintic, as there is in all probability a considerable coating of mucus about the worm which the oil does not remove. Sulphate of magnesia with tincture of jalap he considers the most efficacious preliminary purgative. He conducts his case as follows, and reports 13 consecutive cases successfully treated, 10 of which had been previously treated without result. The patient should eat less than usual for a few days before treatment, and the day before should be restricted to a milk diet with a little stimulant. At bedtime a purgative draught of sulphate of magnesia and tincture of jalap is given, and repeated at 7 the next morning if the first dose has not operated. At 8 A.M. a drachm of fluid extract of male fern is given, and at 9 o'clock a second dose. At 11 o'clock a dose of castor oil is administered; even if the worm has been passed previously, it is well to give the oil to remove any of the poison which may be left. The physician should pay a visit soon after the second dose of male fern has been given, not only to observe the patient, but to inspect all the motions, each one of which should be passed into a separate utensil. In searching for the head it is convenient and less unpleasant to use a dilute solution of permanganate of potash as a disinfectant with which to separate the worm from the feces.—*Boston Med. and Surg. Jour.*

Malarial Organisms in Enteric Fever.

After a short review of the relations existing between typhoid fever and malarial fever, and also a reference to the Woodward theory that the simultaneous presence of the typhoid-fever and the malarial-fever poisons produces a third independent or hybrid affection, called "typho-malaria," W. Gilman Thompson, of New York City, presents a detailed report of three carefully studied cases of typhoid fever, in two of which the malarial body was found and the third contained abundant malarial pigment granules. In the first case reported the plasmodium became active during the course of the disease, while in the second and third cases the malarial organism remained latent until the force of the enteric infection had been nearly expended. These cases distinctly prove that both typhoid and malarial fever may exist simultaneously, a fact that has been disbelieved by many good observers. It is also clear from the evidence presented that the combination of these two poisons does not produce a third definite disease. but that each process goes on side by side. In two of the cases the malarial poison was late it until the resistance of the body had been reduced by the typhoid poison.—*Amer. Jour. of the Med. Sci.*

DR. CHARLES HENRY BROWN, of New York, editor of the *Journal of Nervous and Mental Diseases*, says: "Where maltine with coca wine has served me best has been in cases of neurasthenia from any causes whatever. It certainly serves as a most excellent sustainer and bracer. Besides these two most necessary qualities, we are forced to believe in another in this combination, and that is the composing sedative or soothing quality which makes it a most valuable therapeutic desideratum. It does not seem to me that this sedative action depends entirely upon the coca or coca in combination with the wine. There is a conviction in my mind that maltine plays a very leading sedative part in this triple alliance."

ARMY AND NAVY.

CHANGES IN THE U. S. ARMY FROM DECEMBER 2, 1894, TO DECEMBER 15, 1894.

Leave of absence for four months on surgeon's certificate of disability, with permission to leave the Department of Dakota, is granted First Lieutenant Alexander S. Porter, Assistant Surgeon.

Leave of absence for four months, to take effect on or about January 20, 1895, with authority to go beyond the sea, is granted Captain Walter D. McCaw, Assistant Surgeon.

The leave of absence granted Captain Eugene L. Swift, Assistant Surgeon, is further extended two months.

First Lieutenant Charles E. B. Flagg, Assistant Surgeon, now on duty at Angel Island, Cal., will report in person at Fort Townsend, Washington, for temporary duty at that post.

Captain Euclid B. Frick, Assistant Surgeon, is granted leave of absence for four months.

First Lieutenant Madison M. Brewer, Assistant Surgeon, upon the expiration of his present leave of absence, will be relieved from duty at Fort Riley, Kansas, and will report for duty at Fort Keogh, Montana.

NEWS AND MISCELLANY.

Reduced Rates for Christmas and New Year's.

The B. & O. R. R. Co. announces that excursion tickets will be sold between all stations on its lines east of the Ohio River during Christmas and New Year holidays, at reduced rates, for all trains December 22, 23, 24, 25, 29, 30, 31, and January 1, 1895, valid for return passage until January 3, 1895, inclusive.—3t

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ORIGINAL ARTICLES.

REMOVAL OF DISEASED APPENDAGES RESULTING FROM CLOSURE OF THE CERVIX—REPORT OF A CASE.*

THOS. LEIDY RHOADS, M.D., Boyertown, Pa.

It is a well-established fact with specialists engaged in this particular line of practice that disease of the uterine appendages is frequently traceable to minor gynecological procedures. Among the operations classified under this group, possibly none has been productive of so much harm as that of closure of the cervix for the cure of lacerations. In the majority of cases it is an unnecessary operation, and if imperfectly or carelessly done, on properly selected cases even, the ultimate outcome often proves an added mischief. The history of a case recently operated on by the writer for the removal of diseased appendages, the result, no doubt, of an Emmett operation on the cervix thirteen months previously, may be of interest in this connection.

The patient, aged thirty years, the wife of a banker, had always been healthy to the time of her first accouchement, six years ago. She is the mother of four children, the eldest six years of age. All her labors were of short duration, with speedy recoveries. In her first confinement she sustained a laceration of the cervix and an incomplete tear of the perineum, and for several years after complained of a dragging sensation in the pelvis. In May, 1893, she had the cervix and perineum repaired by a prominent Philadelphia gynecologist, and after several weeks she returned to her home in an improved condition, which lasted for several months. At the end of this brief probatory period an offensive discharge appeared, and she began to suffer from pains in both inguinal and hypogastric regions, shooting down the thighs, violent dysmenorrhœa and headache. She placed herself under the care of a physician of local repute in the treatment of gynecological ailments in a neighboring town, and went the rounds of boroglyceride tampons and applications to the cervix, her condition growing worse daily.

I first saw the patient on May 7, 1894. She was greatly emaciated, weighing only eighty-seven pounds. Her drawn features and anxious expression gave evidence of intense suffering. She had a retarded gait, her appetite was poor, bowels constipated. She suffered from alternating chills and flushes of heat, and complained of pains involving almost every portion of her body, her suffering being especially aggravated in the lower abdomen and pelvis. She could not stand, lie or sit with comfort.

On examination I found both ovaries enlarged to the size of small oranges, tubes tortuous, distended and very tender. Uterus in a state of metritis; cervix eroded and the site of a muco-purulent discharge.

With a view to better her condition she was placed on

* Read before the Berks County Medical Society December 11, 1894.

Ferri phosphatis.....	grs. ij
Quiniæ sulphatis.....	gr. j
Strychnia sulphatis.....	gr. 1-60

Three times daily and hot vaginal douches.

This treatment being continued for a month and her condition becoming more alarming, radical operation was decided upon. This was performed June 9, 1894. The patient received the usual preliminary treatment of baths, douches and purge the day before the operation. The next morning, assisted by Dr. J. M. Fisher and my father, Dr. T. J. B. Rhoads, the vagina was thoroughly scrubbed and douched and the uterus dilated and curetted to remove all the diseased endometrium, a strip of iodoform gauze being carried to the fundus for drainage. She was then placed in Trendelenburg's posture and an incision four inches long made through the linea alba. The intestines were found to be adherent to the uterus and ovaries and the adhesions were broken up. The elongated and distended tubes were inflamed and adherent, with the fimbriated extremities sealed, the ovaries enlarged and cystic, and attached to the left ovary was a small pedunculated fibroid. The appendages were raised through the abdominal incision, tied off with silk ligatures and removed. There was some oozing from the right stump, the ligature having cut through the friable diseased tissue, so a second transfixion ligature was applied which left a dry stump. I might say here incidentally, for inspecting the pelvic organs in these cases I use an abdominal retractor which I devised some time ago, and find it of great aid. It consists of a light U-shaped steel frame, on the upright arms of which slides a cross-bar with spring ends working in a ratchet. On this sliding cross-bar and the base of the U are movable retractors which, when the instrument is placed in position, hold it firmly and retract the wound to any desired extent. The instrument can be applied and removed in a few seconds, and takes the place of an assistant where light and room are necessary factors.

All oozing then being controlled the peritoneum was sponged dry, the omentum brought down to as near a physiological position as possible, and the abdomen was closed with a single row of silkworm-gut sutures, without previous douching or drainage. The wound was covered with an aristol-collodion gauze dressing consisting of a small aseptic gauze pad overlapping the stitch holes so that the collodion which sealed its edges would not come in direct contact with the line of suture. The patient was kept on her back twenty-four hours, then turned carefully on her side. Stitches were removed on the tenth day, the wound having healed nicely, and at the end of the fourth week the patient walked about her apartments. She has improved in health and spirits, takes long daily walks and is daily gaining in weight.

In this case, then, we have an instance where radical interference was necessary to undo the mischief done by a closure of the cervix. An effort had been made to relieve the patient of a minor ailment by this means, and a major operation was necessary to undo the evil wrought.

Closure of the cervix is an operation that is indicated in only a limited number of cases. A cervix laceration may generally be considered physiological (Parvin, "Science and Art of Obstetrics," p. 62, 1890), an exaggerated anterior and posterior lip, and will not often need attention. If serious hemorrhage results from the recent lesion a few stitches may be placed with advantage, but these cases are not so frequent as might at first sight appear. It is remarkable how quickly a tear of the cervix heals, providing the parts are kept clean. The scar tissue contracts so as to minimize the lesion, and the uterus accommodates itself to its new condition, no inconvenience resulting to the patient, even though the tear may have extended up the vaginal vault on either side. The scar thus formed is the normal result of nature's efforts to heal a raw surface, and there cannot follow from it *per se* the ill effects that have at various times been claimed. Where a condition of pelvic distress has arisen months after a protracted and complicated labor in which the cervix was ruptured, the cicatrix has been regarded to be the cause of the trouble, and unsuccessful attempts to cure the symptoms have been made by carefully dissecting out the cicatrix and uniting the denuded surface. The investigations of Boise (*Physician and Surgeon*, September, 1893), however, clearly show that a laceration uncomplicated by a pathological condition other than cicatricial tissue will not cause local symptoms, and other conditions must exist, possibly metritis or

displacement. Successful treatment must be directed against these abnormalities.

The cases of laceration of the cervix with erosion and eversion that are treated by denuding and closing the cervix fail in the majority of cases to cure the existing symptoms for the reason that primarily the laceration, secondarily the eversion and erosion, are considered to be the cause of the local symptoms and reflex disturbances, when in reality they are only the effects of a pathological condition further up the canal. When the condition within the canal is cured, the erosion at the neck and mouth of the canal will generally disappear under warm-water injections. Very likely the cases of eversion and erosion which are reported cured by the Emmett operation were those in which there existed at the same time marked subinvolution of the uterus. These cases can be benefited by the operation, and are practically the only ones where decided good can result.

There is a class of patients that present themselves with vague pelvic and general pains and a lacerated cervix, and operation is done, as it frequently is, merely for its cosmetic effect. These cases will not only experience no relief from their symptoms, but will be subject to the liability to various septic processes and, as is often the case, disastrous results. It may mark the onset of serious pelvic trouble, the injury resulting being due to one of three conditions or all combined.

1. Imperfect antisepsis; bacteria being carried directly to the denuded surface from instruments not made sterile or the hands and operation site not thoroughly cleansed.

2. A cervix operation is a surgical traumatism, and conditions therefore exist with a possibility for inflammation, toxemia and septicemia.

3. Mechanical obstruction. This point is clearly described by Montgomery ("Proceedings Philadelphia County Medical Society," vol. xi): "As a result of subinvolution of the mucous membrane we have an increased amount of secretion which, after narrowing of the cervical canal by the operation, is unable to escape freely. Consequently the uterus becomes dilated to a certain extent, and this favors more rapid extension into the Fallopian tubes and the development of serious trouble." The presence of germs in this state will quickly light up an inflammation, and previously healthy structures are transformed into a condition which, beginning with a cervicitis, has as its sequel pelvic abscess.

I had under my care several months ago from a near city a woman whose cervix was torn in labor two years previously. One-half year later Emmett's operation was performed and was followed by aggravated dysmenorrhœa. On examination I found a very small os. An endometritis had developed—the beginning of a process which might have eventuated in the conditions just named. The disease, however, was still limited to the uterus. She was etherized, and an attempt made to pass the smallest size Pratt's dilator failed. The cervix was then incised on each side, the canal dilated and curetted, with a drain of iodoform gauze. She made a satisfactory recovery and just missed the more serious consequences from the closure of the cervix.

When disease of the appendages already exists, operations on the cervix have a still more serious significance. It is very evident how the pelvic organs can be transformed into a violent inflammatory mass from a traumatism to the uterus under these conditions. Pus and peritonitis are the common results. Pepper ("System of Medicine," vol. iv) refers to the dangers of operation under these circumstances, and gynecologists are constantly called upon to do operations attended with no small amount of risk, in order to save the lives of patients suffering from advanced pelvic disease aggravated by cervical operations. Price ("Proceedings Philadelphia County Medical Society," vol. xi) in an earnest paper counsels more conservatism in dealing with the cervix, and Emmett ("Surgery of the Cervix," 1869) himself, the originator of the operation, finds occasion to say in reference to the subject that his ingenuity is oftener taxed to repair the damages inflicted by means used to afford relief than from the result of disease uncomplicated.

I desire, then, to present the following points for discussion by the society:

1. Laceration of the cervix is rarely productive of serious symptoms and seldom requires operation.

2. Emmett's operation if done on improperly selected cases is not alone barren of good results, but often aggravates existing diseased conditions and not infrequently is the exciting cause of pathological processes in previously healthy structures.

SENILE ENLARGEMENT OF THE PROSTATE—NOTES OF A CASE IN PRACTICE.

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On the 29th of September, 1890, I was called to meet two medical men in consultation on a gentleman, a farmer in easy circumstances aged sixty-one years. He gave the following history: During a month or two he had been troubled with undue frequency in passing urine, especially at night, having to rise three or four times from his bed for that purpose. Two days previous to my visit he had been engaged in threshing, had caught cold, and on getting up at midnight of the 27th was unable to pass his urine, which was causing him considerable uneasiness. A medical man was sent for, but not being able to come at once sent some opium powders, and next morning finding his patient unimproved tried to pass a catheter but failed. The patient succeeded during the day in passing a few drams of urine, but not improving any, another medical man was called. Catheterization was again tried, but failed to attain the desired result. The next day on my arrival I found the patient in severe pain, with the bladder distended and with a temperature of 102° F., pulse feeble and beating 120. The medical attendants told me they had made several endeavors to pass a catheter, but failed, and in fact were ordered to desist by the patient on account of the pain and distress they caused him. Their efforts were, I do not doubt, persistent enough, for the urethral canal was discharging blood. They had made a diagnosis of stricture.

I found (per rectum) the prostate much enlarged, and in consultation dissented from the diagnosis made. Neither of the doctors would agree, nor would the patient, with my opinion that the bladder was engorged with urine. They were doubtless deceived by the fact that the patient was passing a small quantity of urine frequently, as evidenced by the angry words of the patient: "Don't tell me my bladder is full when I'm passing water every few minutes." I explained that this was due to an overflow and that pain and distress were due to distention, but it was with very great difficulty that I succeeded in inducing him to allow me try to pass a catheter, and only after promising to desist if I hurt him. I tried a No. 7 English and then a No. 3 English. I failed with both.

I had with me several catheters overcurved on stylets in the manner advised by Sir Henry Thompson, of the University College Hospital, London, and I determined to give them a faithful trial. First I gave the patient ¼ gr. morphia sulph. hypodermically; then put him in a sitz-bath at 105° F. for 35 minutes. I then tried to pass one of my over-curved catheters (without stylet, of course) and succeeded without any difficulty in getting it into the bladder. By this means I was enabled to withdraw (which I did gradually) about forty ounces of very inodorous urine, much to my own and the patient's satisfaction. I washed out the bladder with a weak solution of acid. boric. and left directions for the urine to be withdrawn every three hours. The patient was given a dose of cascara and ordered

℞ Liq. potassæ.....
Tr. hyosc..... āā m xv
Syr. zingib..... q. s.
Every four hours.

Next morning I was called again. The urine had been allowed to accumulate for longer than three hours and defied the efforts of the attendant to pass the catheter. I had recourse to the hot bath again and soon overcame the difficulty.

Three days later there was the same trouble, but on this occasion I was able to pass a French coudée without assistance of the bath. Then I instructed patient in the use of the instrument and left him a supply, one of which he occasionally uses. He has had the best of health during the last four years and bids fair to live to a ripe old age.

THE corset has figures to show—
Despite what the doctors may say—
That while fashions may come and may go,
It is certainly with us to "stay."

A PRACTICAL STUDY OF SERIOUS ABDOMINAL CONTUSIONS, WITH A CLINICAL REPORT OF TWENTY-ONE CASES.*

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[CONTINUED FROM PAGE 862.]

REPORT OF CASES.

CASE I.—Contusion of abdomen and fractured ribs in a pregnant female. History: Annie N., aged 40; married; admitted to hospital June 25, 1891, by ambulance.

Patient was hanging out clothes, holding the line while she leaned over the window-sill on the fourth story, when the line broke and she fell, striking on the stone flags below. On examination, fracture of the ninth, tenth and eleventh ribs was discovered and the right lumbar region was severely contused. She was at this time eight months pregnant. On admission, in great shock, she complained of intense pain over the right kidney. The whole abdomen was exquisitely sensitive. Placental and fœtal heart sounds distinct on auscultation. Unable to urinate; some nausea.

Withdrew six ounces of urine, which was densely saturated with blood. There was a large bulging tumefaction just anterior to the right kidney which was suggestive of extravasation of blood or urine. As soon as she entered the hospital restoratives were administered and a firm binder applied.

Great prostration; no paralysis and no cerebral complication.

On second day after admission she had fairly reacted. Temperature, 101.5° F.; pulse, 110; respirations rather shallow.

Remained about the same, passing large quantities of blood with the urine. On the evening of the twenty-eighth day she was taken with severe labor pains. At 1 A.M., twenty-ninth, she was delivered with the aid of the forceps of a dead male child. Delivery easy and without accident.

Everything went well until the evening of the following day, the thirtieth, when collapse suddenly set in and she sank at 7.40. A post-mortem examination was denied.

This case derives its peculiar interest from the physiological condition of the patient at the time the traumatism was sustained. Although physical evidence proved that the infant was not killed outright, it finally succumbed from the great exsanguination which its mother endured through an extensive laceration of the kidney and secondary shock.

Experience teaches us that when labor sets in at advanced term after great bodily injury, the danger to life is great.

From a medico-legal standpoint an important question might arise here as to whether it could be proved that the death of the child could be traced to the injury when, as in this case, its body bore no evidence of trauma.

There was all the more reason for the question to arise in this case, as the house surgeon saw fit to expedite labor with the forceps. The renal lesion here was well pronounced, for there was evidently a through-and-through rent, inasmuch as blood flowed off in large quantities through the pelvis and out of the urethra. Besides, the extravasate into the retroperitoneal tissues was voluminous.

It was my opinion that renal exsanguination led directly to the death of mother and child.

CASE II.—Contusion by fall. History: Patient aged 20; bricklayer; married; admitted to hospital February 26, 1890, by ambulance. Diagnosis: Contusion of abdomen, fracture of right ilium and pubis.

Patient while walking on scaffolding made a misstep and fell four stories (about fifty feet), striking his abdomen and pelvis on the right side. Immediately sent to hospital. On admission, in great shock, deathly pale; limbs and body deeply cyanotic. Stimulants freely plied and heat applied to the extremities. As reaction set in violent projectile vomiting commenced, but no blood was ejected. As rupture of the bladder was suspected it was distended with ten ounces, but this returned without any blood tinge. The integuments over the hip were deeply ecchymotic and a linear fracture was discovered running vertically through the

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ilium, between the anterior superior and inferior spines, besides another through the center of the horizontal ramus of the pubis on the right side. The right inguinal region was full and evidently distended by a large intraperitoneal effusion of blood. The pelvis was firmly fixed by a strong binder and steadied by sand-bags. Opium freely given for the first four days. Moderate tympanites with hyperæsthesia of surface. Had to be catheterized for one week. Bowels opened by a clyster on the fifth day.

Recovery rapid, and patient returned home March 29th, with instructions to continue use of strong binder for the next three months.

The case was one in which the body itself was the moving agent which, in its rebound as it came in contact with the earth, suffered damage over the hypogastrium and the pelvic bones. The skeleton evidently scattered the momentum of impact at the expense of its continuity.

There was no loss of blood beyond that into the iliac fossa nor serious injury of any internal organs.

Case III.—Compressive contusion. History: Miles J.; driver; married; aged thirty-nine years; admitted December 15, 1889, by ambulance. Diagnosis: Contusion of back and abdomen; traumatic peritonitis.

Patient was driving a cart loaded with brownstone in a stone-yard three days before admission, when he was thrown off forward and the wheel of one side passed over the abdomen.

No great pain was experienced at the time, but two days later it commenced and he was sent to the hospital.

When admitted he was placed in the medical ward, as it was supposed that he had simple traumatic peritonitis. His condition rapidly improved after he had been placed on treatment, and after the second day he was up about the ward, feeling much improved. On the 22d, however, seven days after admission, pain again set in with great severity; rise of temperature, great weakness and rapid distention of the abdomen, making respiration quicker, more labored and painful.

On physical examination of the abdomen it was evident that there was a large liquid accumulation, but what its precise character was it was impossible to determine by any special symptom.

To determine this an exploratory needle was passed in over the right flank. On its withdrawal it was evident that the material consisted of bile.

Now diagnosis of rupture of the gall-bladder was made, when the case was transferred from the medical to the surgical division for further treatment. At this time his general condition was very bad, and the extent of abdominal distention was so great as to render breathing extremely difficult.

An operation was now undertaken with a view of draining away the fluid and, if the patient's condition permitted, endeavor to close the rent in the gall-bladder. An oblique incision was made on the right of the median line along the slope of the floating ribs. Through this 732 ounces of bile escaped, or 5¼ gallons.

He almost at once went into mortal shock after the peritoneum was opened, dying on the evening of the 25th, eight hours after operation.

Autopsy.—The following day autopsy was made. General peritonitis, with deep bronzing of all the viscera.

A perforation about one line in length was found in the posterior wall of the common bile-duct. It was of a linear direction. In the immediate vicinity of the erosion there were evidences of previous adhesive inflammation having formed, which subsequently gave way, permitting a leakage into the cavity of the general peritoneum.

This was a case of compressive contusion and belonged to that consecutive type of rupture of the viscera which may succeed at various periods after the original injury is sustained. Here we note steady improvement for the first week under constitutional medication. Adhesive inflammation had begun to wall off the site of the contusion and of leakage in the choloduct. But he was imprudently permitted to leave his bed too soon, and in some sudden commotion of the body the adhesions were broken and the peritoneum became infected. From the side of diagnosis and treatment the case furnishes us with many important speculations and suggestions. It accentuated the well-known difficulties in diagnosis and prognosis so characteristic of traumatic intraperitoneal lesions, for in the beginning it was supposed to be so benign a case that recovery was almost a certainty. A laparotomy at an earlier

stage after admission of this case could have availed nothing; on the contrary, it no doubt would have been promptly followed by a fatal termination.

In this class of cases we should observe Hinton's dogma of rest of an injured organ, and in all cases of hepatic traumatisms we should endeavor, as far as possible, to diminish the physiological functions of the liver. This can be accomplished by permitting nothing to enter the stomach except small quantities of water, alimentation being maintained entirely by the rectum, until we are assured that reparative processes are complete.

CASE IV.—Contusion by a fall; death of fœtus; hemorrhage; peritonitis; laparotomy. History: Patient 28 years old; a female. Diagnosis: Acute traumatic peritonitis. Mrs. M., married six months. For five months prior to accident menstruation ceased. The breasts had become fuller and the abdomen enlarged. Besides, she had morning nausea and for some time had noticed swelling of her ankles.

On the afternoon of June 12, 1889, patient, while crossing on some planks over an excavation in the sidewalk, was injured severely over the abdomen by one of the planks rolling from under her feet. She came down with great force on the abdomen. Some workmen near by who saw her fall came to her assistance and lifted her out of the trench into which she had fallen.

She was in great pain, but would not have an ambulance called. After resting about an hour and having had some stimulants, she walked home—about a quarter of a mile. In the night she had severe abdominal pains and sent for a physician. He ordered sedatives, and the next day, though she could not leave her bed, she felt much relieved. But late in the night violent pain set in, and the abdomen became greatly distended. She became steadily worse until the fourth day, when she had a flow from the vagina which gave her some relief. The next day worse than ever, when the physician was changed. He was so alarmed at her condition that he immediately gave an unfavorable prognosis and recommended a consultation, when I was invited in.

I found a woman with all the symptoms of advanced acute peritonitis. On examination of the abdomen under chloroform, a large mass was made out to the left of the median line, rather above the iliac fossa. It had a hard, resistant feel, and was altogether too large for a pelvic abscess, besides being out of its radius. Over on the right side, anterior to the kidney, was another fullness, which, however, was very freely movable, and of such a puzzling outline and conformation that I could scarcely venture a guess of what it was. Having hurriedly run over in my mind the various lesions here seen after traumatism, and remembering that the woman gave a history of pregnancy, it occurred to me that possibly this was a case of extra-uterine pregnancy. In any event I advised that a section of the abdomen be made at the earliest moment. The next morning with assistance I opened the abdominal cavity. The large mass on the right side was found to be a vast effusion of coagulated blood, at the bottom of which was a placental growth imbedded in the broad ligament. From this a cord extended across the peritoneum to the right side, under the kidney. Here a five months' fœtus was found lying in the free peritoneal cavity. The placenta was detached and the peritoneal cavity well irrigated. Recovery ensued, though convalescence was tedious.

The above case was one of a unique and extraordinary character. Her large vaginal hemorrhage on the second day after injury, together with the presence of a deciduous membrane, deceived the first medical attendant, as it indicated an abortion. Although at time of operation her condition was most unpropitious, yet with a temperature of 104° and a pulse of 138 she promptly rallied and made an excellent recovery.

In this woman's singular case, in which it is very probable that, though paradoxical as it may seem, an accident which endangered her life led to its preservation from a pathological condition certain to follow, there were no traces of discoloration of integument over the seat of injury.

CASE V.—Percussive contusion; rupture of ureter; moderate peritonitis. History: Patient male; married; forty-one years old. This case came under my care eight years ago, in the spring of 1886. Patient was a derrick-man. While swinging blasted rocks on to a wagon he accidentally got in the way of a large moving bowlder and was violently struck over the

right antero-lateral zone of the abdomen, immediately below and to the right of the umbilicus. He was knocked down and for nearly an hour was unable to rise. But after a while, when he had taken freely of hot whisky, he got up and went home unaided. The next day he was seen by me. Now, although the entire abdomen was sensitive, the most intense pain was in the right lumbar region. His urine, which was passed with great difficulty, was at first very bloody; constitutional disturbance was not marked and no great pain except on movement of the body. He was suffering from moderate traumatic peritonitis and a general bruising of the abdomen. After ten days in bed he made a good recovery, except for a swelling which appeared as soon as he took his feet. This was lodged in the right lumbar region. It was about the size of a small cocoanut, fluctuated and was moderately compressible. As there was now no rise of temperature it was evident that it was not an abscess. Its anterior integumental covering was deeply ecchymosed.

An exploratory needle was passed in, when it was found that the collection was urine. A large aspirating needle, with a vacuum attachment, was then sent in and eleven ounces of urine withdrawn. On the third day following it was again aspirated and nine ounces withdrawn. It but moderately filled again, and in a little while the tumor gradually commenced to diminish in volume and sensitiveness. In a little while longer it had wholly disappeared. In order to positively determine the nature of the aspirated fluid, a chemical analysis was made of it and it was proved to contain nothing but the elements of the normal urine. This case was remarkable as illustrating how the deeply lodged ureters may suffer severe contusion or laceration while the more superficial organs escape. It besides demonstrated how little constitutional disturbance attends the extravasate of healthy urine when it is uncontaminated and effectively encysted.

Case VI.—Compressive abdominal contusion. History: Patient a child nine years old; male; admitted to hospital August 16, 1884. Diagnosis: Abdominal contusion with internal hemorrhage.

Patient climbed on to a vender's heavily loaded coal wagon, when the horse suddenly started and he fell forward, both wheels passing over the abdomen. Those who saw the accident supposed that the boy was killed. He was unable to rise and groaned from pain in the abdomen.

When brought to the hospital he was in great pain and almost pulseless; extremities cool and of a deathly pallor; vomited blood-stained fluid and complained of much pain in the region of the bladder. About one ounce of limpid urine was drawn off, and on test of the bladder it was found that there was no rupture. Moderate doses of opium were given and local applications employed. Reaction slow. The following morning abdomen tympanitic and extremely sensitive; unable to retain anything in the stomach and thirst was intense.

On the fourth day after entrance temperature, which had run high, was nearly normal, the bowels opened, and he passed with stool a large quantity of blackened, partly digested blood. From this time improvement was steady and he left the hospital in good form September 20th.

Hemorrhage is always badly borne in growing children when its quantity is large. In this case the greatest immediate danger arose from this source.

There had evidently been a considerable loss both within the lumen of the bowel and into the peritoneal cavity.

It seemed almost inconceivable that a cart carrying more than a ton of coal could pass over this boy's body without doing great destruction to the viscera within. Yet he survived it, and at no time after injury was there any discoloration of the abdominal integument.

A sharp attack of peritonitis followed, but, as is usual with most cases of this malady in non-penetrating abdominal injuries, it underwent favorable resolution.

Case VII.—Contusion of the abdomen by percussion. History: Patient aged twenty-nine; married; female; housekeeper; admitted July 7, 1893. Diagnosis: Contusion of abdomen with fracture of the tenth and eleventh ribs on right side.

This woman was seriously injured, as a great many are every year in this city, by the breaking of a clothes-line while hanging out clothes through a window at a considerable elevation from the ground. When the line which she held broke she went out of the window and fell three stories to the ground, striking in transit on her abdomen across a fence.

When she entered hospital was in profound shock, though rational. Muscles of the abdomen tense and physical evidence of free hemorrhage into the peritoneal cavity.

Abdominal pain extreme and great distress over the liver on any motion of the body. Fracture of tenth and eleventh ribs, but no displacement nor crepitation.

Pulse extremely rapid and feeble. Morphine had to be given in large and frequent doses to alleviate abdominal pain. No blood in the urine, but there was a free discharge of it from the vagina.

She constantly complained of most agonizing distress over the umbilicus. Frequently vomiting a greenish watery fluid with no blood. Reaction had fairly set in the following day; she had all the symptoms of peritonitis. Examination *per vaginam* revealed a state of pelvic cellulitis.

Alimentation entirely by the rectum for the first five days. Abdominal meteorism great and respiration sighing and shallow. By the sixth day the temperature had reached 104.6°; pulse, 134; respiration, 38.

After this date improvement commenced and continued uninterruptedly until her recovery. She left the hospital September 26th.

In this case a fearless operator might have opened the abdomen for exploratory purposes, but with the shock she was in it would have been indeed a bold step, and even should she survive it it would have accomplished no good. It would have left a weak abdominal wall with a tendency to ventral hernia, a deplorable condition for a working, child-bearing woman.

Here there was presumably laceration of the liver, with every probability of a rupture of the intestine, which was evidently sealed by an agglutinative peritonitis. Her vaginal hemorrhage was of uterine origin, produced by direct injury to this organ.

The tympanites in this case was so great and prolonged that had it occurred in the male it would probably have ended mortally by paralysis of the diaphragm; but in the female, where respiration is chiefly costal, an enormous abdominal distention can be endured with impunity. Besides, there can be no question but that women bear peritonitis and its resulting pain with much greater prospects of recovery than do men.

Opium in large and frequent doses was our sheet anchor in this case.

CASE VIII.—Compressive contusion; the body supine. History: Patient, William H.; eighteen years of age; single; admitted to hospital April 23, 1891, by ambulance. Diagnosis: Contusion of abdomen; internal hemorrhage; traumatic peritonitis; rupture of bowel.

On the evening of April 23d patient, who was an epileptic, was seized with a fit on Third Avenue. In order to try and save himself from falling he rushed into the street and seized the front wheel of a heavily loaded express wagon; was drawn under and run over by it. He was immediately brought into hospital by the ambulance. On admission he was in great shock and constantly groaned with pain.

No external evidence of contusion was found. Complained of great pain in abdomen and desire to urinate, but could not. Catheter evacuated six ounces of very bloody urine. Pulse and respiration rapid and feeble. Vomiting set in soon after entrance; ejecta bilious but containing no blood.

Treatment.—Hot applications and stimulants, with enough narcotics to subdue pain. Temperature, 97.2°; pulse, 110; respiration, 26.

April 24th. 6 A.M., temperature, 97.6°; pulse, 102; respiration, 24. 6 P.M., temperature, 97.4°; pulse, 100; respiration, 22.

April 25th. 6 A.M., temperature, 100.6°; pulse, 116; respiration, 22. 6 P.M., temperature, 99.5°; pulse, 120; respiration, 22. Pulse weak and thready; tympanites well marked; fed freely per enemata with egg-nog and milk-punch. The slightest bodily movement or coughing aggravated his distress; urine still bloody, but less so than on the first day.

April 26th. Temperature, 99.8°; pulse, 120; respiration, 28.

April 27th. Temperature, 101.6°; pulse, 110; respiration, 28.

April 28th. Temperature, 104.4°; pulse, 120; respiration, 22.

April 29th. Temperature, 101.3°; pulse, 120; respiration, 24.

April 30th. Temperature, 102.4°; pulse, 104; respiration, 24.

May 1st. Temperature, 99°; pulse, 112; respiration, 24.

May 2d. Temperature, 104°; pulse, 120; respiration, 25. On this date patient was freely sponged with alcohol, and afterward temperature fell to 101.2°. General peritonitis now well developed.

May 3d. Temperature, 102°; pulse, 100; respiration, 26. Patient now begins to show signs of lobar pneumonia. A large hot jacket poultice now applied, which extended from the pubes to clavicle, and frequently renewed.

May 4th. Temperature, 102.6°; pulse, 100; respiration, 26.

May 5th. Temperature, 102°; pulse, 130; respiration, 40. Now stimulated and nourished by the mouth.

May 6th. Temperature, 102.6°; pulse, 112; respiration, 32. Patient's general condition was very much improved. Bowels spontaneously opened to-day for the first time; breathing much easier and sleep returning.

Was steadily improving, and on May 13th temperature, 98.6°; pulse, 109; respiration, 27.

May 11th. Patient had an epileptic convulsion.

May 14th. Temperature, 101½°; pulse, 110; respiration, 20.

May 20th. Temperature, 100.6°; pulse, 120; poultices discontinued.

May 21st. Temperature, 104°; pulse, 110; respiration, 24.

May 22d. Temperature, 100°; pulse, 90; respiration, 19.

May 24th. Pulse and respiration normal. Patient rapidly convalescing.

May 30th. Patient discharged cured.

The above case was one attended with several serious complications. First, the injury to the renal tissues; second, internal hemorrhage; third, probable rupture of the intestine; fourth, general peritonitis, besides lobar pneumonia, presumably from injury to the lung.

In this case, as with the previous two, the viscera were crushed against the vertebral column. The extent of shock was considerable, and yet, with all the proof we had of serious internal injury of the abdomen and thoracic viscera, there was nothing to indicate it on the abdominal walls. Recovery under these circumstances emphasizes what nature will accomplish in this class of cases without resort to heroic surgical intervention, and that traumatic peritonitis, even of a very aggravated type, if appropriately treated, may do well without incision or drainage.

CASE IX.—Direct contusion and compression; peritonitis; rupture of thoracic duct. History: Patient thirty-five years old; married; male; admitted to hospital July 3, 1893. Patient when alighting from a street-car was violently struck by the pole of a brewery wagon, was knocked down and run over by the hind wheel. An ambulance was called and patient was sent to hospital. Patient in much shock. There was an abrasion over the right iliac crest anteriorly. Complained of great pain in the lower abdomen; unable to urinate, though he had a constant desire to; urine withdrawn and bladder tested for rupture.

On third day temperature had reached 100°, pulse 86 and respiration 32; pain not so severe; appetite much improved, but is steadily losing strength.

On July 10th a large mass was detected in the right flank, which fluctuated on palpation; flat on percussion. It evidently was lodged behind the peritoneum and displaced the intestine forward and inward.

It was at first supposed to be a hæmatoma, but on penetration with hypodermic needle was found to be pure chyle

On July 15th a free incision was made into the tumor and a little more than seventeen ounces evacuated of a thin milky fluid. It was of sweetish odor, slightly saline taste and resembling very much human milk. On chemical and microscopical analysis it was found to be chyle.

For the first three days about eight ounces a day escaped through the puncture and was secured.

On the 18th and 19th about two ounces escaped each day. From this time the quantity gradually diminished until the 21st, when it quite ceased. Specific gravity of fluid varied in different days and various hours of the same day, always flowing more plentifully after taking nourishment; general strength improved after lactocele dried up; had painful vesical trouble for some time after, though by October 21st he had recovered sufficiently to return to his home.

This case was highly interesting from various considerations. The injury was produced by a compound force, first the blow of the carriage-pole, and, secondly, the weight of the passing loaded beer-wagon. There are reasons to believe

that the former struck the hypogastrium with great force, doing damage to the thoracic duct by crushing it against the body of the second lumbar vertebra, on which it rests; and, secondly, that all the viscera, especially the bladder, suffered by the compressing force of the vehicle.

Traumatic lesions of the thoracic duct from concussive violence are exceedingly rare. In this instance its rupture evidently was secondary to contusion. The escaping fluid made its way through the retroperitoneal tissues, finally gravitating into the iliac fossa. By rest in bed the rent apparently closed of itself, when the salutary effects on nutritive processes were distinctly marked.

CASE X.—Compressive contusion; shock; hemorrhage and rupture of intestine. History: P. K., aged 34; married; male; admitted to hospital June 24, 1893. Diagnosis: Contusion of abdomen with internal hemorrhage.

Patient was a middle-sized man, a driver of a cart in the Department of Street Cleaning. On the morning of above date, as he was hurriedly urging his horse up the "run" to dump his load of street garbage in a scow below, a rival driver collided with his cart, throwing him off, when the wheel of one side rolled over his body as he lay on his back. He was unable to rise unaided.

An ambulance was summoned. When he entered the hospital he was in great collapse; some vomiting of blood with great pain over the umbilicus. Warm applications to cold extremities; internal stimulation and narcotics. Pulse extremely small and rapid; temperature subnormal.

From the extreme pallor it was supposed that he had a large internal hemorrhage, yet there were wanting the physical signs of it.

June 25th. Seemed somewhat better in the morning, but toward noon pain set in again with greater severity than ever, with incessant vomiting; abdomen now ballooned up and exquisitely sensitive; collapse deepening; moribund state approaching. Died on this day at 2.40 P.M.

Autopsy. — Twenty-four hours after death the body was examined. Now there were two well marked ecchymotic spots visible, one over the anterior superior spine ilium on right side, and one further down over a space in about the middle of Poupart's ligament. On opening the serous cavity a large effusion of blood was discovered between the omental apron and Cooper's fascia.

On dividing the omentum it was seen that there had been a rupture through the jejunum in about its center. The opening was about three centimeters in length and looked as though it had been produced by a direct laceration. Particles of digestive aliment were found mixed with a large serous effusion. No evidence of serious damage to the other adjacent organs. This was a case which, had its precise character been understood, might have been treated by laparotomy with reasonable success.

It is true that he was in great shock for some hours after admission, and the free hæmatemesis which he had on admission greatly exsanguinated him, yet probably we could scarcely hope for a more desirable case to test it on than this was.

I must confess that when I saw him the morning after injury there were no desperate symptoms present, and it seemed to me that the case was by no means without hope. But one of the house staff ventured to suggest that there might be intestinal rupture. It was then suggested to the patient that a laparotomy might become imperative if worse symptoms should set in. This, however, he would not permit under any circumstances.

The mortal termination was as sudden as it was unexpected, but it was entirely in keeping with the alarming rapidity of serious changes so often witnessed after peritoneal traumatisms.

CASE XI.—Direct contusion of abdomen; peritonitis and rupture of jejunum. History: Patient aged twenty-three; single; male; admitted to hospital June 23, 1893. Diagnosis (primary): Severe contusion of abdomen. Patient was an operator on what is known as a circular ripsaw in a lumber yard. While feeding the saw, as he pressed a piece of lumber which had a knot in it, it splintered as the blade of the saw struck it, when a large piece rebounded and hit him a blow, as he said, on the pit of the stomach. He was felled by the blow, and remained unconscious some minutes before he was able to breathe.

Now the abdominal pain was very great and he was unable to rise. An ambulance

was called and he was brought into the hospital. Was in great shock on entrance.

June 24th. Vomited nearly everything he swallowed; considerable thirst, tympanitic abdomen and apparent peritonitis. Morphine freely administered hypodermically. Bowels constipated.

June 25th. Is growing steadily weaker and fails to respond to stimulants. Vomiting returned in an uncontrollable form. Collapse set in early in the evening and he died at midnight.

Autopsy.—The next afternoon the abdomen was opened. The peritoneal cavity was filled with blood and fluid of a fæcal character. General peritonitis. In about the center of the jejunum a rupture was discovered which extended about halfway through the intestinal coil; a dark, worm-eaten margin marked the site of perforation. The intestinal lumen for some distance beyond the point of injury was distended with blood, coagulated.

This case was a typical one of injury by percussive or contusive violence. The man was first hit with great force over a limited area, crowding the intestine against the spinal column and probably severely contusing the intestinal walls, probably splitting the internal tunics so seriously as to devitalize the part and favor speedy gangrene. In this case not the least visible trace of external violence could be seen and no rupture of muscle followed.

The first phase of serious abdominal injury was great shock, probably from contusion of the solar plexus and the heart, by concussion being transmitted through the diaphragm. Secondly, as reaction set in, hemorrhage into the intestine through laceration of its inner coats, and hemorrhage into the cavity of the peritoneum through injury to the vessels in the mesentery.

The last and fatal phase was consecutive gangrene of the bowel's wall, fæcal escape and fulminant peritonitis.

Case XII.—Contusion of abdomen by crushing. History: Patient forty-six years old; married; male; admitted to hospital June 17, 1894. Diagnosis: Contusion of abdomen, fracture of pelvis and internal hemorrhage.

This man was injured by being knocked down in the street by horses and then crushed under the hind wheel of a brewer's wagon which at the time was loaded with barrels of beer. The wheel in some unexplained manner came between the legs, passing up over the horizontal ramus of the pubes, the iliac fossa and the right lumbar region, the edge grazing the border of the integument over the floating ribs. He was immediately raised and transported to hospital; on admission in mortal collapse, the pulse barely countable and fast failing at the wrist.

He was perfectly rational and said he had no pain, but he knew his end was near and called for a priest.

On a superficial examination it was found that there was an extensive fracture through the pubic ramus and the iliac plate; the pelvis was filled with blood, which in the flanks produced large fluctuating projections; the bladder was empty and there were no signs of rupture; stimulation was not responded to and he rapidly sank two hours after admission.

In all cases of serious crushes of the lower abdomen complicated with fracture of the pelvic bones the resulting lesions are generally mortal. This is because the great blood-trunks or hollow viscera are either torn open by the sharp spiculæ or edges of fracture, or else lacerated, by the crushing force brought on them, against the sharp borders of the pelvic brim or some part of the linea-ileo-pectineal line. The man's death was plainly caused by shock and internal hemorrhage.

An autopsy was denied.

Case XIII.—Contusion of abdomen (percussive). History: Patient aged 42; single; male; admitted May 8, 1894. Diagnosis: Abdominal contusion with rupture of the spleen and internal hemorrhage.

Patient was a sailor who on the morning of entrance to hospital fell into the hold of the ship, striking on his left side over the sharp edge of a cask. He was lifted up in great collapse and sent to the hospital. Six hours after injury he was seen by me. At this time the abdomen was distended by a fluid accumulation and was extremely sensitive over the spleen, where he complained of most intense pain. There was no abrasion or discoloration of the integument over the abdomen. The pulse was exceedingly feeble. He was deathly pale, though the extremities were warm.

As this case seemed one in which a laparotomy might be borne with compara-

tive safety and there were unmistakable evidences of hemorrhage, after consultation with my colleague, Dr. Chas. B. White, and with his acquiescence, it was undertaken.

The patient took ether badly and struggled as he went under anæsthesia. His pulse seemed rather firmer when anæsthesia was complete.

Operation.—An incision was made to the left of the rectus muscle in an oblique direction outward and downward about four inches long. On puncturing the peritoneum, bright red blood spurted through.

Now hastily extending the incision and passing in the index and middle fingers, the spleen was reached. It was found badly lacerated, one fissure extending vertically upward, nearly cutting it in two. The organ was now carefully drawn into the incision, when its hilum was seized and the artery and vein being ligated separately with strong silk, the spleen was cut away. The peritoneal cavity was filled with blood. Before this could be removed by sponging mortal symptoms suddenly set in, breathing became irregular and shallow and he became pulseless. Time was barely permitted to close the incision with suture when he was dead.

The appalling suddenness of death here was startling in one who but a few moments before was in possession of all his faculties. Every possible care had been taken to provide against shock. The operating-room had been well heated, there was no peripheral loss of blood, and the time in operating occupied but a few minutes, as I was ably assisted by Dr. White and the house staff of four physicians. But the torrent of blood that came through when the peritoneum was opened, the sudden displacement of the large escape of it by the sponge and exposure of the peritoneum were too much for him.

Perhaps a laparotomy under these circumstances might seem a questionable procedure, yet it was in accordance with sound principles in surgery, for it seemed the only course open to the permanent and definite arrest of hemorrhage. My regrets in this case were that I touched him with a scalpel or forced my unfortunate patient into an ether coma, for it is my conviction that his chances of recovery were quite within the range of possibility if he had been allowed simple rest with an abundance of refrigerant drinks and stimulants. Nature's ways of arresting hemorrhage in the young and healthy are marvelous. Within the peritoneum the more blood escapes the greater is the pressure over the site of bleeding, mutilated tissue. The blood irritates the endothelial layer of the peritoneum and thereby provokes the abdominal muscles into rigid contraction, and hence we have an augmentation of intra-abdominal pressure. But by opening the abdomen nature's best efforts were thwarted and the only means by which life might have been spared may be rudely frustrated.

[TO BE CONTINUED.]

Etiology of Rheumatism.

One of the most commonly observed symptoms of a tired-out sympathetic system is disturbance of the digestive function, which is presided over by that system of nerves. The most common form of indigestion under these circumstances is the fermentative or acid. Hence the process is simple, the ingested food enters the stomach, where, owing to abnormal conditions, instead of exciting a physiological congestion of that organ and a properly increased flow of gastric juice, owing to the impaired condition of the sympathetic nerves, this does not occur, and as a consequence the food, instead of being digested, ferments, generating gas and lactic acid, the gas to be expelled and the acid to be absorbed with whatever peptones may result from the attempt at digestion, and the circulating fluid, the tissues and excretions of the body become vitiated by it, *i. e.*, the blood becomes less alkaline and the secretions less alkaline, or acid, producing the state of body most favorable for the accumulation of uric acid in its tissues. In this manner the way is paved from irritation of sympathetic nerve terminals to an excess of uric acid in the system, which constitutes with its attendant and resulting symptoms lithemia, and composes the necessary congeries of conditions the next step in advance of which, the proper exciting causes being added, is acute articular rheumatism.

A GREAT SPECULATION.—The price of Koch's new lymph is one dollar a dose. Further comment is unnecessary.

COMMUNICATIONS.

REMOVAL OF BOTH TESTICLES FOR CHRONIC HYPERTROPHY OF PROSTATE.*

J. D. THOMAS, M.D., PITTSBURG, PA.

I report the following case of double castration for enlarged prostate and chronic cystitis.

C. C., aged sixty years; German; by occupation a nurse; was sent into the South Side Hospital by Dr. J. E. T. Martin, under whose care he had been, on August 4, 1894, for operation. This was done on the following day. Patient has never had a venereal disease; he has a double hernia. About ten years ago he began to notice that he was urinating oftener than usual, and that he was obliged to get up during the night. This trouble grew worse year after year, until at present he is obliged to urinate every half-hour during the day and eight or ten times during the night. When he is urinating he is obliged to get upon his knees and succeeds in emptying his bladder by drops. This straining causes prolapsus of the rectum. The pain is so intense that the whole household is disturbed by his groans. Has been taking paregoric, on his own responsibility, to relieve this pain. In the past has resorted to the catheter, as his occupation made him familiar with its use; but the pain eventually became so intense with its use that he abandoned it. On examination of the urine it was found to be neutral and contained a large amount of pus; the patient described it as looking like thick buttermilk. Residual urine two ounces. The soft catheter passed without much difficulty, suggesting thereby that there was very little, if any, median hypertrophy. Examination by the rectum revealed both lobes of the prostate markedly but uniformly enlarged.

The choice of operation was left with the patient. As his virile powers had been lost for several years he chose double castration, which, with the assistance of Drs. O'Conner, Martin and others, I did as stated above. The patient remained in the hospital for five weeks, and during this time his bladder was thoroughly treated by Dr. Martin. Before the operation and for some weeks after his physical condition was very bad, but a perceptible improvement in the urinating function was noticeable in a few days, and this improvement has continued right along to the present, although he has had no medical treatment now for some weeks. He can at present retain his urine during the day for from two to six hours and during the night for two hours. Urination now causes very little pain; the urine is voided promptly and in a good stream. The urine still contains at times some flakes, but the patient states that there are other times when it is quite clear. By rectal examination a diminution in the size of the prostatic hypertrophy is patent to the finger. My impression is that his greatest discomfort at present comes from his double hernia. The patient and his family feel grateful for the marked improvement that has taken place since the operation.

I report this case as the operation resorted to is a comparatively new one for the cure of chronic hypertrophy of the prostate body. In this country I believe that Dr. J. William White, of Philadelphia, is the most ardent exponent of this operation. His experiments, as well as those of others, have demonstrated that in the dog the removal of the testicles is followed by atrophy of the prostate. Raum (*Therapeutic Gazette*) reports two cases "in which cystitis persisted, and which disappeared like magic after the removal of the testicles. The hypertrophy of the prostate decreased immediately." In my case the cystitis did not disappear "like magic," neither did the hypertrophy decrease "immediately," but the improve-

*Read before the Allegheny County Medical Society November 20, 1894.

ment took place gradually, continuously and satisfactorily.

During the month of August last I removed both testicles for tubercular disease. I reported this case in full to the society in August and again referred to it in September, although sufficient time had not elapsed to make an absolute prognosis. I sent for this patient last night and examined his prostate. It is much diminished in size, and the results are all that could be desired. In an editorial in the *Journal of the American Medical Association* this matter was recently taken up and a number of cases mentioned in California, in Philadelphia and elsewhere; but the report of this society was not recognized. Evidently the editor of the *Journal of the American Medical Association* does not read many medical journals.

NEPHRECTOMY FOR SARCOMA OF THE KIDNEY IN A CHILD TWENTY-FIVE MONTHS OLD.*

X. O. WERDER, M.D., PITTSBURG, PA.

Freda D., aged twenty-five months, has always been a healthy baby and is of healthy parentage. About three months ago Dr. E. S. Riggs, having been consulted about a small umbilical hernia, detected a growth in the left hypochondriac region somewhat larger than an egg. Since then it has been growing rapidly to its present size. The child has not seemed to suffer from the pressure of this growth, though lately she has been more irritable. Appetite has always been good, bowels regular, no symptoms of any disturbance of the urinary organs. Absence of hæmaturia. The child is plump and of healthy appearance, though her mother thinks that there has been some slight emaciation noticeable recently.

Physical examination reveals a large, somewhat elastic tumor occupying the left abdominial cavity, extending from the ribs to the crest of the ilium, and downward into the left iliac fossa, to within about an inch of the umbilicus and filling out the left lumbar region. The tumor is not sensitive to touch and is slightly movable in an antero-posterior direction.

Diagnosis of malignant tumor of the left kidney was made and nephrectomy proposed. Though a guarded prognosis was given as to the result of the operation and the possible return of the disease both by myself and the attending physician, Dr. Riggs, the parents consented to have an operation, which was performed August 29, 1894, at the Mercy Hospital.

Incision in the left linea semilunaris about six inches in length, which subsequently had to be enlarged to about eight inches, being very careful to avoid all hemorrhage. The tumor having been exposed, the peritoneum over it was incised, the very thin, fatty capsule surrounding it opened and rapidly peeled off, and the tumor lifted from its bed along with the kidney, which was behind and continuous with it. Pedicle ligated at the hilum of the kidney, including all its structures; several bleeding points ligated; cavity carefully sponged out and closed without sutures, and the abdominal wound united with silkworm-gut sutures without drainage.

The child stood the operation, which lasted from forty to forty-five minutes, remarkably well; during the whole operation certainly less than an ounce of blood was lost, as very careful hæmostasis was observed. There was no vomiting following the operation; pulse, after operation, 124; temperature next day up to 102°; but after that it varied from normal to 100°. Urinated spontaneously about two hours after the operation, and passed about ten ounces first night. Exact amount could not be estimated, as it was usually voided in bed. The child was discharged from the hospital well on the fifteenth day.

Pathological condition: Tumor irregular in shape; nodular growths at either end; attached to the anterior surface of the kidney, directly continuous with its structure, but only involving about one-third of the organ. Section showed interior growth to be soft, containing brain-like substance, in one portion beginning to

* Read before the Allegheny County Medical Society, November 20, 1894.

break down. Weight of tumor 2½ pounds; kidney not involved by growth, normal.

A microscopical examination, made by my assistant, Dr. F. Gibson, showed the growth to be a rhabdo-myosarcoma.

The case is interesting, especially for the reason that it demonstrates how well the youngest child will bear the most serious operations.

I saw the child a few weeks ago, when it was a picture of health, having gained considerable flesh since the operation.

TRANSLATIONS.

THERAPEUTICAL SUGGESTIONS FROM FOREIGN JOURNALS.*

TREATMENT OF MENINGITIS.

Dr. Melbec (*Revista Clinica e Terapeutica*, No. 10, 1894) in the treatment of acute meningitis advises avoidance of all excitement and emotions and rest in a well-ventilated and darkened room. Shave the patient's head and apply continuously an ice-bag. Each morning and evening administer a powder of the following formula:

Muriate quinine.....	0	30	grs. ivss
Benzo-naphthol.....	0	50	grs. viij

Sufficient for ten powders.

In case the restlessness be very intense order a soupspoonful of the following:

Bromide strontium.....	2	0	grs. xxx
Chloral.....	4	0	ʒj
Sirup opium.....	20	0	ʒv
Sirup hyoscyamus.....	40	0	ʒj ʒij
Wintergreen water.....	60	0	ʒij

Every two days give in the morning a powder containing

Calomel.....	0	50	grs. vijss

Let the diet consist of milk and broths.

Twice a day give a teaspoonful of the following:

Ext. cinchona..... }	āā 5	0	ʒj¼
Ext. kola..... }			
Sirup orange peel.....	150	0	ʒivss

In the tuberculous form one may frequently prevent the disease by forbidding the mother to nurse her child or that it be nursed by a tuberculous wet-nurse. Raise such children in the country and at the same time give them a teaspoonful of cod-liver oil daily. Each morning rub their bodies with cold water to which a little alcohol has been added. Develop the body by appropriate physical exercise and do not allow such children to commence their studies too early. Every day inject hypodermically, according to the age of the patient, one to two ccms. (gtts. xv–xxx) of the following:

Guaiacol..... }	āā 5	0	ʒj¼
Eucalyptol..... }			
Iodoform.....	1	0	grs xv
Sterilized olive oil.....	100	0	ʒiij ʒj

Every day administer in a little milk a powder of the following formula:

Calomel.....	1	0	grs. xv
Powdered sugar.....	2	0	grs. xxx

Sufficient for ten powders.

Counteract the restlessness, the cries and convulsions by ordering to be given every half-hour until quiet follows a teaspoonful of the following:

Bromide strontium.....	1	0	grs. xv
Chloral.....	0	50	grs. vijss
Sirup valerian.....	20	0	ʒv
Sirup peppermint.....	60	0	ʒij

An exclusive milk diet. The vomiting attacks may be prevented by increasing the dose of the bromide.

* In chage of the translator, F. H. Pritchard, M.D.

"MRS. BLINKS is quite ambitious to be considered a well-informed woman, isn't she?" Mrs. Banks—Yes, indeed; she is leaving nothing undone to get herself elected president of the sewing society. —*Chicago Inter-Ocean.*

ANCIENT COQUETTE—What, you are a major already? How time flies! Do you remember how often you used to play with me when I was a little girl? Major —That was my father. A. C.—Oh, no. Major—Then 'twas my grandfather.— *Fliegende Blaetter.*

"Do you believe that contentment is better than riches?" "Perhaps so, if you have them both together."—*Chicago Inter-Ocean.*

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SATURDAY, DECEMBER 29, 1894.

EDITORIAL.

A BALANCE SHEET.

The current number completes the seventy-first volume of THE MEDICAL AND SURGICAL REPORTER and ends the forty-second year of its consecutive publication.

1894 will be notable in the records of science as a medical year. The remarkable development of surgery during the few years past has obscured to a considerable degree the progress of medical research. The dazzling reports of brilliant results aroused a furor for operating which amounted to an indiscriminate craze. As experience dispels the fanciful, sound judgment discerns the fact from the factitious and, the ebullition of gas subsiding, reveals what is of genuine value and abiding usefulness. Modern surgery can accomplish wonders, but it is now settled that laparotomy is not essential for the relief of acute indigestion, nor is trephining indicated for globus hystericus. As an *applied* science modern surgery is more than ever an art requiring masterly skill and scrupulous training.

Although there have been occasional proclamations of great operative inventions or of revolutionary "modifications" or improvements, as a rule such procedures have proved merely the sky-rockets of surgical pyrotechnics, whose brilliancy vanished long before their explosion was evidenced by report, and professional attention has been diverted to the equally important if less conspicuous field of scientific medicine.

In hygiene and public health measures, protective and preventive, advances are evident.

Independent of business enterprise, and sometimes in spite of it, there has been progress in the province of therapeutics. Of the multitude of new remedies clamorous for trial and subjected to test, some have proved useful, some useless, the majority remaining on trial.

"Of the making of books there is no end," thanks to the prevision of generous publishers, and the literary crop of the

year contains some wheat among the tares. A few works have been issued in special lines whose value justifies their existence. For pronounced excellence, general utility and widest application, Dr. Gould's new medical dictionary deserves specific mention among the publications of 1894.

Most notable, however, is the prominence obtained by the applications of inductive medicine—inductive, if treatment based upon premises deduced from the observations of experimental researches conducted in the laboratory and upon the lower animals may be called inductive. In this new departure bacteriology has ruled supreme.

Bacteriology has developed with marvelous rapidity, and for a recent comer has been allowed undue importance. It did not spring into existence a full-fledged science. Its development is in truth but an enlargement of its field of work and an increase of its store of accumulated observations. As yet its data are barely sufficient for working hypotheses. Beyond establishing facts of unknown relevancy, it has proved nothing save by inference. Thus far it has not been able to demonstrate beyond very reasonable doubt the truth of its cardinal dogma, the microbic origin of disease. It has shown enough to admit of the general acceptance of the germ theory as a matter of conviction. But conviction is not proof in a scientific sense.

However incompetent to dictate, bacteriology has been of incalculable value to medical science. It has thrown light on obscure conditions; it has secured the solution of difficult problems; it has suggested possibilities heretofore undreamed and it has inspired determination to realize the possible.

To-day the entire world is anxiously awaiting the decision of medical science as to the value of the latest product of bacteriology, the antitoxine treatment of diphtheria. Unfortunately the reports of this treatment are so uniformly and enthusiastically favorable as to arouse grave suspicion of reliability. It will be well to observe the results of the procedure in the hands of American practitioners and in this country, before selling all possessions and sending the cash abroad to secure this alleged pearl of great price. Tuberculin bubbles are very costly, both in money and in self-respect. Moreover, what the new treatment may have of genuine utility will have been demonstrated by European experience by the time properly prepared serum is available for general use here.

Other novelties of undetermined value have been presented for professional assay, among them the "animal extracts" and nuclein therapy.

Medical associations have flourished with increasing vigor, and the most valuable contributions to medical literature lie scattered throughout society "transactions."

The balance sheet will show a year of much profit to medical science.

For Ringworm.

Iodine has been found to be one of the most effective agents for destroying the parasite upon which this disease depends. An excellent method of applying it is the following: Thoroughly cleanse the scalp with soap and water. Dry perfectly, then apply a solution of one part of pure iodine in thirty parts of flexible collodion. Renew the application each day for four days. At the end of fifteen days remove the collodion, wash the scalp first with soap and water, then, after thoroughly removing the soap, wash with a hot solution of bichloride of mercury, one-twenty-five-hundreth. After allowing the bichloride solution to remain in contact with the scalp for half an hour, wash with pure water, dry, and apply vaseline or zinc ointment. If necessary, repeat the application.—*Mod. Med.*

YOUNG HUSBAND—Amy, what makes that baby yell in that way? Young Wife—His teeth, dear. Young Husband—Oh, if that's all, I'll run for a dentist and have them pulled out.—*Boston Home Journal.*

ABSTRACTS.

A CASE THAT OUGHT TO HAVE BEEN ONE OF RAILWAY SPINE.

The subject of "railway spine," or "injuries of the cord and its envelopes without fracture to the spine," has been of such intense interest of late to the railway surgeon that much of the time allotted to one convention of railway surgeons has been devoted to this subject and its discussion. So much has been said pro and con that one is sometimes in doubt if such a disease really exists, and in some cases, in order to produce the disease after the injury, supposed or real, has been received, it is necessary that "suggestion" should be brought into requisition, and in the absence of this suggestion the disease often fails to materialize even after quite severe injuries. The most atrocious experiments to establish the true nature or condition of so-called railway spine, or to establish the fact that such a disease does or does not exist, have recently been practiced on dogs and other dumb animals, the recital of which makes the blood of the Berghites run cold at the excessive cruelty of the means employed in the experimentation; but as yet nothing seems to have been definitely settled, either as to the nature of the disease, real or imaginary, or as to the treatment of this condition. It seems, however, that the one word "suggestion" is needed to give shape and form to this disease, no matter what the injury may have been in the first instance. Webster says of suggestion: "It is a hint, a first intimation, proposal, or mention;" second, "a presentation of an idea to the mind, as the suggestion of fancy or imagination;" third, "insinuation, secret notification or incitement;" fourth, in law, "information without oath." Hence we see the nature of suggestion and are able to determine in some measure the effect it may have on the mind. Now as nearly, if not quite, all these cases of "railway spine" occur near large towns or cities, or among those who live in them, it is safe to suppose that those developing them have received from the wiseacres and interested persons the necessary suggestion that they are so badly injured that they must certainly be paralyzed or that they will be permanently damaged, and they can get a snug sum out of the company if they will only bring suit on that ground; and if no counter-suggestion is offered that would annul the suggestion the suit is often successful, and the railway company frequently unjustly mulcted out of a large sum of money to settle the so-called damages.

Illustrating this subject, a case with the detail of circumstances will be given, which occurred in the practice of the writer about two years since, a case that certainly ought to have been one of railway spine, and as it is one so well suited for the illustration of this as well as of another subject which has engagad the attention of railway surgeons, viz., of the power which whisky seems to have to prevent shock, it is here given as being of double interest.

Bert M., a high-toned tramp of local reputation, having already "a good jag on," started out in quest of another "load," which he expected to get in the adjoining town, and took the railway track as his highway. He had not gone far, however, before the load he was already carrying became too heavy for him. It being Sunday, a day of rest, he laid him down to sleep on the railroad track, and being very drunk his sleep was profound. For further description of the incidents as they occurred I cannot perhaps do better than to quote from a letter I received from a railway official who was an eye-witness to the occurrence and was riding on the engine at the time:

"Dear Sir: Replying to your favor of —— date relative to our engine on the Devil's Lake special striking Bert M. on September 11, 1892, I have to say that the train was running about forty miles per hour when Engineer William C. discovered a dark object laying on the track at a wagon-road crossing, which he supposed to be a dog until he got close to it, when he discovered that it was a man lying down with his legs at right angles with the track and his body parallel and on top of the rail. He was lying on his left side with the lower part of his body toward the on-coming train. The 'pilot' being low struck him square on

the rump, knocking him clear off the track into the ditch, his only injury appearing to be a badly skinned face, caused by sliding on the gravel after being struck. He was very drunk and did not move when the engineer sounded the whistle. He had to be helped on the train, which was done without difficulty. He was quite peaceable, except swearing at the engineer for waking him up and making such a noise. On our arrival at Tecumseh he had sobered up sufficiently to get off the train and walk into the depot without assistance. The train was running at the rate of about ten miles an hour when it struck him." Here is a case of a man being struck in the back or, as the narrator terms it, on the rump, by a ponderous locomotive and train running at the rate of ten miles per hour, throwing him into the ditch like a cow or hog, but being braced up with very liberal libations of whisky, shock seemed to have been prevented. He was seen by the writer within an hour after the accident, but not until some one had given him the suggestion that he would probably be paralyzed and that he ought to sue the company for damages. On examination it was found that the face was badly skinned on the left side and over and about the left eye, also that the back was badly bruised over the dorsal and lumbar vertebræ. He complained of numbness in both legs and feet, and it seemed difficult for him to stand or walk. Full doses of ergot were prescribed for him, and an occasional dose of bromide of potassium. He was sent to his home, four stations distant, the same afternoon, with instructions to follow up his treatment as long as his medicine lasted and to apply frequently along the back a lotion of arnica and whisky, which was given him, the arnica being added to prevent him from drinking the whisky and the rubbing to keep him active and his mind engaged. In about a week the writer received a letter from this patient, offering to "whack up" and divide the profits if he could get assistance from this source to help him win his suit. He was at once informed by letter that the company was in no way responsible for his injuries and that it was very certain he could never gain anything from the company by suit, and that the very best thing he could do would be to "brace up" and get well just as quickly as he could.

Here was the counter-suggestion, which had its effect, for the man made a rapid recovery and was perfectly well in ten days, although claiming that he was completely paralyzed at the time his letter was written asking for assistance to "go in" with him and sue the company for damages. Upon careful investigation only a few weeks since it was ascertained that he has remained perfectly well ever since. The only treatment employed in this case was as before stated.

It is not urged that cases of railway spine do not exist or that serious and fatal injuries do not often occur involving the spine, but it is believed that cases of so-called "railway spine" are far more frequent than they should be, resulting from the class of injuries that are said to produce them, *i.e.*, concussion or succussion of the cord occurring in collisons and derailments without any bruising or crushing injury, and that very many of these cases are of malingering, which may often be cured by a counter-suggestion from the surgeon and but very little simple treatment, and it is proper for surgeons to be on their guard for just such cases.

To go into a minute description of the anatomy of the spinal cord or of the pathological conditions that may exist in cases of so-called "railway spine" is not within the scope of this paper. It is believed, however, that if the surgeon will offer the counter-suggestion with sufficient firmness many cases of traumatic neurosis that now come under our care would be avoided, with great relief to the surgeon, the patient and the railway companies.—*Dr. Woodward in Railway Age.*

Chloroform Nausea.

With regard to chloroform nausea, too little regard is paid to prophylaxis. In the case of sea-sickness nothing is so important as treatment of the stomach before the voyage; and nothing will prevent chloroform sickness like careful dieting and some compound rhubarb powder during the three days preceding operation. In emergency cases washing out the stomach before operation would be most useful. To treat the nausea, absolutely nothing by the mouth, except perhaps a few drops of acidulated ice-cold water to relieve the dryness of the mouth itself, and copious, faintly saline enemata to relieve thirst, though stern treatment from the patient's point of view, is the shortest and best road to relief.

CURRENT LITERATURE REVIEWED.

IN CHARGE OF ELLISON J. MORRIS, M.D., AND SAMUEL M. WILSON, M.D.

IN THE BUFFALO MEDICAL AND SURGICAL JOURNAL

for December, Dr. George E. Clark writes on

Hydrotherapy in Appendicitis.

In articles on appendicitis the use of water is recommended only for the purpose of opening the bowels, but the author has found great benefit from the systematic use of cold-water enemata when the bowels were not inactive.

A series of seven consecutive cases is given, all of which had "localized pain in the right illiac fossa, induration or tumor, McBurney's tender point, fever and furred tongue. Some had vomiting, all had diarrhœa or constipation, or diarrhœa followed by constipation." (Corresponding to Osler's definition of symptoms).

These cases received no medicine except in a few instances where an initial dose of phenacetine was given. All received enemata of cold water at intervals varying from every hour to three times daily and had wet cold compresses applied over the tumor. The rapidity of cure bore a certain relation to the number of enemata given, but the innovation was so strongly objected to by the families of some of the patients that in these instances only two or three injections daily were given. The treatment was usually continued five or six days.

The author states that he does not think this method will cure every case, and thinks operation is necessary in some instances, but some of the cases reported seem to have reached a point where no choice was left before being seen by him.

The probable explanation of this effect of cold water, the author thinks, lies in the fact that the vessels of the rectum and sigmoid flexure are secondarily dilated and actively withdraw blood from the inflamed cæcum.

Dr. A. A. Young writes of

Some Points in the Etiology, Pathology and Indicated Treatment of Diphtheria.

The author regards the disease as primarily a systemic one, and thinks local treatment of the throat as ineffective as the local treatment of a chancre would be (thinking both diseases systemic before locally manifest).

The swelling of the cervical and submaxillary glands he thinks an important diagnostic symptom, as it should be manifest at least as soon as the membrane.

Mechanical obstruction of respiration by membrane is not believed in, but these cases are regarded as primarily due to paralysis of the (general) respiratory nerves; therefore tracheotomy is not advocated in such cases.

The treatment will probably be the use of antitoxine and toxalbumen; but at present pilocarpine is given to increase elimination of poison, corrosive sublimate; not, he expressly states, as a germicide, but to increase the red-blood corpuscles, and sodium chloride, papoid, etc., to assist digestion. Permanganate of potash is used as a gargle as a concession to popular prejudice.

The members discussing the paper thought the disease primarily local, with systemic infection secondarily, tracheotomy was thought to result in the cure of a fair proportion of cases of threatened asphyxia, and the antitoxine treatment was mentioned as a promising one.

Dr. Lawson Tait gives

A Criticism of the "Germ Theory of Disease" Based on the Baconian Method.

The author claims that antiseptic drugs are being relied on without the free ventilation that should accompany them. The results in certain hospitals show that overcrowding and consequent lack of ventilation still give large mortality records, in spite of the use of germ-destroying drugs.

THE SANITARIAN

for December publishes an article on

Drinking-Water and its Relation to Malarial Diseases,

by Dr. Richard W. Lewis.

The author became convinced that since the plasmodium malariæ has been proven present in malaria, this disease must be due to some substance swallowed. The plasmodia are very common in surface water, and personal experience proved that however much he was exposed to mist, night air, etc., he escaped malaria so long as he swallowed none of the surface water.

A number of circulars were sent to physicians and others living in malarial regions, asking for their experience with this disease in relation to drinking-water. The replies varied, but the majority showed that the writers thought the exclusive use of cistern or artesian well water was a decided preventive of malarial infection.

Other papers in this issue are "The Discoverer of the New Specific for Croup and Diphtheria," by Dr. C. W. Chancellor; "The Examination of the Milk Supply for Tuberculosis in the State of New York," by Dr. F. O. Donohue; "Administration of the Medical Law of the State of New York," by Dr. H. M. Paine.

THE JOURNAL OF CUTANEOUS AND GENITO-URINARY DISEASES

for December. Dr. F. J. Tower writes of

Gouty Deposits of the Testicle.

The author uses the term "testicle" to mean the cord, epididymis, tunics, etc., excepting only the scrotum.

No literature bearing directly on this subject has been discovered by the writer, although various authorities in writing of gout mention epididymitis, orchitis, urethritis, etc., as being sometimes directly due to this disease.

In the cases reported the gouty diathesis was readily proven, uric-acid crystals were obtained once or twice from hydrocele fluid, and there had been no venereal disease. Passing an exploring needle down to the deposits elicited a grating sound, but caused no pain excepting that due to piercing the skin.

The predisposing causes seemed to be (1) an unsupported varicocele; (2) a newly married young man indulging in excessive coitus; (3) a direct inguinal hernia poorly supported by a truss.

No special treatment is advocated, and the prognosis depends on the size of the deposit and the tendency to recurrence of attacks of gout.

Dr. A. L. Gnichtel reports a

Case of Diphtheritic Vulvitis in a Child.

The child was one year old and lived in a house where two fatal cases of diphtheria had recently occurred. The internal labial surfaces and the urethral orifice presented diphtheritic membrane when examined on the fifth day of the child's apparent indisposition.

Bacteriological examination confirmed the diagnosis. The constitutional symptoms developed and the growth disappeared under washes of peroxide of hydrogen and bichloride solution.

Dr. Hermann Goldenberg writes of the

Modified Thompson Test for Urethritis Posterior.

Thompson's test is the examination of the first and last of the urine passed by a patient, collected in separate glasses. It was supposed that if posterior urethritis existed "threads" would be found in both portions; otherwise only in the first.

This having been shown to be unreliable, it was proposed to wash out the anterior urethra with clean water. Then if any pus or threads passed in the urine the posterior urethra would be proven involved

Lohnstein, of Berlin, criticises this method, claiming that the fluid from the anterior urethra is forced back past the cut-off muscle into the posterior portion, and proved by the Prussian-blue test that this might occur.

The author admits this criticism, but showed, apparently, that this was only the case if an eyed catheter was used in irrigation, a counter current forming around the eye of the instrument. The method he uses is the introduction of a short glass or hard rubber tube as far as the fossa navicularis, withdrawing a little and then irrigating. Using the ferrocyanide solution in this way and then carefully washing the glans and the prepuce, the blue reaction was not found. He therefore thinks this method perfectly reliable.

Dr. James C. White reports a case of

"So-Called 'Angioma Serpiginosum.'"

The patient is a boy twelve years old, subject to an eruption occupying a belt three inches wide, extending from the right shoulder blade to the nipple.

At birth there was noticed a purplish-red mark, half an inch in its longest diameter, situated near the right scapula. This increased in size until he was four years old, when a second smaller one appeared and since then others.

These spots begin as bright red, slightly elevated points, which gradually increase until they are from an eighth to one-sixth of an inch in diameter and an eighth to one-twelfth of an inch above the general surface, firm in consistence, and partially disappear from long pressure

These now undergo involution in the center and continue to spread peripherally, losing their regular shape by contact with similar lesions. The central skin retains a purplish color, but otherwise resumes its normal characteristics.

An attempt was made to destroy this growth by Paquelin cautery, but eventually it spread beyond the resulting cicatrices.

Examination microscopically by two experts of a couple of lesions excised for the purpose showed toward the middle of the section a lesion occupying the whole of the derma, consisting of a mass of cells more or less sharply defined at the margins, which are festooned or drawn out into angular trails which seem to form a network by ramification.

The epidermis is unaffected; the papillæ elongated, but not penetrated by the cells; but in the subpapillary stratum there is a nearly continuous layer of these cells. In the corium are to be found streaks, or ovoid masses, parallel to the fibers, and deeper on the border of the hypoderm the masses are abundant and seen in contact with the glomerulus, but never invading the tubes of the gland.

These cells are found to be young connective-tissue cells, and have an evident tendency to group themselves concentrically about centers made up of cells attached at the edges to form a canal.

Being a non-inflammatory new formation of connective tissue, this deserves to be classed as a sarcoma, and the microscopist furnishing the report proposes the name sarcome angioplastique reticule.

American observers examining the other sections compared the tumor to angiosarcoma, without declaring them identical.

Treatment of Impermeable Strictures of the Urethra.

The difficulty that is frequently encountered by surgeons in penetrating very tight urethral strictures has suggested a method of dilating them which others may find of service in their practice. It consists in passing down to the site of the stricture a catheter shaped as a simple cylindrical tube, open at both ends—an ordinary catheter from which the eyed end has been cut off and the edges carefully smoothed does very well—and through this as a guide, introducing the largest instrument, from a filiform bougie upward, which can be made to penetrate the stricture.—*Charles H. Wade in Lancet.*

PERISCOPE.

IN CHARGE OF WM. E. PARKE, A.M., M.D.

MEDICINE

The Value of Chloroform in Internal Medicine.

We are so apt to regard chloroform as a pure anæsthetic when taken by inhalation that many of us are wont to overlook its value as an internal medicament, and as a result of this oversight lose a valuable aid to treatment in many affections, some of which are apt to obstinately resist the ordinary remedial measures. One of the most important applications of chloroform is its internal use for the relief of pain either in the chest or abdomen, pain in the latter region yielding naturally more readily to its influence. Particularly is this the case where the pain is of a griping character, either due to irritability of unstriped muscular tissue in the wall of the intestine or to the presence of irritating foods or large quantities of flatus. Under such circumstances twenty to forty drops of the spirit of chloroform added to two tablespoonfuls of water and perhaps aided by ten to twenty drops of the spirit of camphor is one of the very best prescriptions that we can give. Further than this, those of us who believe in the value of antiseptic medication will recognize the fact that chloroform, under the circumstances which we have named, not only relieves the pain, but acts as one of the most powerful antiseptics which can be taken internally with moderate impunity. It is a well recognized fact in therapeutics that many volatile substances seem to exercise very considerable power in checking all forms of watery diarrhœa, and where pain in the abdomen is associated with liquid movements chloroform possesses a third scope for usefulness. Not only is it of value in the forms of pain which are due to direct irritation or inflammation in the abdomen, but it is also useful in those pains which are due to nervous disturbance, such, for example, as in ordinary neuralgia of the stomach or true gastralgia. In obstinate vomiting, two to five drops of pure chloroform in a little water, taken in teaspoonful doses, will often act advantageously, and when the vomiting is due to the ingestion of bad food, particularly food which has undergone some decomposition process, it is especially indicated. In the vomiting of pregnancy, with some practitioners, it is held to be the best remedy. Another very valuable application of chloroform is its employment externally in liniments in cases of muscular rheumatism for stiffness of the muscles due to strain or excessive exercise. Possessing as it does not only counter-irritant, but anæsthetic effects, its employment in this manner is most advantageous. Another use to which it is too rarely put is for the production of counter-irritation varying from slight reddening to actual blistering of the skin. Slight reddening is rapidly produced by applying a cloth saturated with chloroform to some portion of the skin so remote from the respiratory apparatus as to avoid inhalation in any large quantity, and the blisters may be formed by placing chloroform on the skin under a watch-glass, so that too rapid evaporation will not take place. For those who are unable to take opium in any combination for the relief of pain in any part of the body, a prescription composed of thirty drops of spirit of chloroform and ten minims of the fluid extract of a good cannabis indica is a valuable prescription.—*Ther. Gaz.*

Chloroform During Sleep.

The following case is of interest as bearing on the question whether a sleeping person can be chloroformed without awakening. The reporter was asked to take two teeth out for a girl aged seven, and as she is very timid and excitable, to give her chloroform. On going to her home he found her lying on her back in bed, sound asleep. Having poured about two drachms, probably more, of chloroform on a folded towel, he gradually brought it to about two or three inches from her mouth and held it there. She went on breathing quite quietly, and neither coughing nor making any unwonted movements. In a very short time she was so well under its influence that her hand fell down when raised and the conjunctiva was insensible to touch. She was then lifted out of bed, carried into another room and laid on a sofa without her giving any sign of consciousness. On opening her mouth, however, she put up her hands and turned her head on the pillow. More chloroform was given, and almost immediately she was in a state of complete anæsthesia and the teeth were extracted. She was easily aroused, but almost momentarily fell again asleep and slept for two hours. When she awoke she was much astonished to find that her teeth were out.—*Ther. Gaz.*

Turpentine Vapors and the Elimination of Uric Acid.

Benoit du Martouret (*Lyon Medicale*) gives the details of two cases—one of arthritism accompanied with right crural neuritis and cardiac arterio-sclerosis, and the other of pyelo-nephritis of calculous origin—in both of which dry turpentine vapor baths produced satisfactory results by distinctly increasing the elimination of uric acid. For these baths the fresh resin of the *pin mugho* was used. In view of the results obtained, the author suggests that cases of pyelo-nephritis due to the presence of calculi might be cured by the treatment alluded to. This will in time so reduce the size of the calculus that it may with ease be voided through the natural passages.

Dr. Brown-Sequard's Orchitic Fluid.

The death of Dr. Brown-Sequard has served to revive in some minds an interest in his orchitic fluid, in which the great physician had himself much hope. The *Lancet* in a recent number publishes some significant notes upon experiments with the fluid made by Dr. Guy M. Wood and Dr. A. J. Whiting, both physicians to the Hospital for the Paralyzed and Epileptic, Queen's Square, London. The fluid was obtained directly from Paris; through Dr. Brown-Sequard's personal kindness. The injections were hypodermic, made with a Koch syringe, kept aseptic in absolute alcohol. The dose was from one gramme of the fluid to six grammes, and in all but three cases diluted with an equal quantity of water. Except when the doses were large, no immediate effects were perceptible. In those some pain was felt at the point of injection. Twenty-three patients were treated. In 18 cases there was no change from the treatment; 3 patients were slightly better; 2 were worse. At the beginning of the observations several patients said they felt better after the injections. At the suggestion of Dr. Buzzard, two women were given daily injections of two grammes of distilled water only for three weeks. Both the patients declared that they felt decidedly better after each treatment, though of course there was no change in the physical condition. The physicians, therefore, conclude that in all the cases treated the sensation of being better was due to the mental effect of the injection and not to the orchitic fluid, and they do not think that the results obtained warrant any further trial of the remedy.

Hydrastinine in Uterine Hemorrhage.

According to Kallmorgan, who has treated during two and a half years 100 patients with hydrastinine, the best results are obtained in the cases of hemorrhage following hematocele, 100 per cent. being cured; in simple menorrhagia, 85 per cent.; in hemorrhage after abortion, 83 per cent.; and in hemorrhage dependent upon disorders of the tubes and ovaries, 75 per cent. Less satisfactory was the treatment of chronic endometritis, and little or no influence of the drug could be observed in cases of hemorrhage during pregnancy or arising from myoma and carcinoma. The remedy was administered by the mouth in the form of pill, the dose varying from one-half to one grain three times daily. The by-effects were only slight—occasional stomach-ache or nausea. No other therapeutic treatment accompanied that with hydrastinine.—*Med. Chronicle.*

Menthol in Diphtheria.

F. Kastorsky (*Brit. Med. Jour.*) reports 37 cases of diphtheria (in 3 adults and 34 children) treated and cured by painting with a 10 per cent alcoholic solution of menthol. The paintings (by means of a piece of cotton wool) were usually carried out three times daily. In some cases, however, a single free application was followed by a complete disappearance of false membranes within two days. A marked improvement in the patient's general condition was invariably noticed from the beginning of the treatment. The same simple method was successfully practiced by the author in numerous cases of anginas of various forms, and by Trutovsky in a group of cases of scarlatinal diphtheria.—*Maryland Med. Jour.*

SURGERY.

Hydrotherapy in Fractures.

More than twenty years ago the writer adopted the practice of treating fractured limbs for a short time with various applications of water before putting the parts into a permanent dressing. By this means it is found possible to avoid much of the pain, swelling and discomfort which the patient usually suffers during the first few days after the application of the dressing, and to secure more speedy and complete union, with less disability of the overlying muscles and the contiguous joints. We have frequently found hot fomentations most useful in these cases. The application of hot fomentations, or soaking the affected parts in hot water for an hour or two, almost invariably has the effect to relieve pain from circulation in the contused vessels, to prevent swelling, to overcome muscular spasm and rigidity, and to promote the recovery of the patient. If there is much displacement of the fragments it is, of course, important that the parts should be drawn as nearly as possible into position. The parts can be retained by a temporary pasteboard splint and light bandage during the application until the permanent dressing is applied. Dr. T. Morton, of Philadelphia, recently reported a case (*New Eng. Med. Monthly*) in which an ununited fracture of the leg was made to unite three or four months after the accident occurred by applications of hot water and massage.—*Mod. Med.*

Fin de Siecle Treatment of Gonorrhœa.

Among the numerous suggestions on the treatment of gonorrhœa with which the medical press abounds, none has appeared which is so entirely unique as that presented by Dr. Burnside Foster in a recent issue of the *Journal of Cutaneous and Genito-Urinary Diseases.* The method proposed is described as follows by the author: "As soon as may be after we have established the diagnosis of a first gonorrhœa, the patient should be etherized and properly prepared, a button-hole opening made in the perineum and drainage of the bladder established. Through a properly contrived apparatus the anterior urethra could then be thoroughly flushed with any antiseptic or cleaning fluid and treated on surgical principles. The details of the local treatment would vary with the fancy of the operator. The feasibility of packing and distending the anterior urethra with iodoform gauze suggests itself to me; but any one of a great number of methods would doubtless be efficacious."

Functional Troubles Following Old Fractures of the Patella.

After a careful study of this subject Choux (*Rev. de Chir.*) comes to the following conclusions:

1. The functional troubles consequent upon old fractures of the patella are either insufficient extension or flexion.

2. The difficulty in extension is due less to the atrophy of the triceps muscle than it is to the momentary physiological inability of the muscle to act efficiently upon the lower fragment of the patella.

3. The difficulty in flexion is dependent on the fibro-articular thickenings, which are themselves due to the retraction of the patella tendon and to the method of union between the fragments.

4. Of the five modes of union, as generally divided, two types alone are capable of interfering with flexion; they are the short but stiff osseous or fibrous union and the fibrous union with 2 to 5 cm. separation of the fragments.

5. The prognosis in incomplete extension may be doubtful for several years, but restoration of function is generally the rule. Intraosseous suture of the fragments is indicated in cases where the spontaneous re-establishment of function is not realized after a reasonable length of time.

6. In regard to partial ankylosis resulting almost always from short, rigid union between the fragments, either osseous or fibrous, but increasing the length of the patella 2 or 3 cm., he considers the removal of one of the two fragments the only possible means of overcoming the functional difficulty, unless these types are transformed, as often happens, into types more favorable to flexion.

7. The articular inflammatory thickenings, which often disappear, should be held under observation for from twelve to fourteen months, and are eminently fitted for the hydrothermal treatment as used in the hospital of Bourbonne.—*Amer. Jour. of the Med. Sci.*

Cautery for Furuncle.

Loewenberg (*Bull. Medicale*) recommends to abort furuncle the employment of the galvanic cautery, using a fine platinum point, 1 cm. long and not over 1 mm. in diameter. When the developing furuncle is recognized by a light area surrounding one of the hair follicles and special sensitiveness to the touch, the cautery point is brought to a white heat and is thrust into the center of the areola deep enough to reach the bottom of the hair follicle, and is left there an instant in that position before it is withdrawn. He has especially applied this method to the furuncle of the ear, and claims for it a prompt action in checking the formation of new centers of inflammation.

New Means of Local Anæsthesia.

One Dr. K. L. Schleich, of Austria, claims to have discovered that absolute immunity from pain, even during protracted operations, may be obtained by subcutaneous injections of a sugar or salt solution, or of merely cold distilled water; that the results induced are to all intents and purposes identical with those obtained by like employment of cocaine. He adds:

The patient may remain perfectly conscious during the amputation of hand and foot without undergoing the tortures so often inflicted upon the battle-field or the exceptional dangers of syncope ever present in the operating-room when general narcosis is resorted to.

It is declared that this discovery has already borne the test of several experiments and is about to be applied in the hospitals of Vienna. The explanation of the phenomenon is:

Local insensibility to pain is induced in the case of cocaine by purely chemical changes, while cold water and solutions of sugar and salt act mechanically through high pressure and low temperature. Under the influence of high pressure and sudden low temperature the blood and lymph are driven from the places operated upon to where the pressure is less. The tissues are thus deprived of their supply of blood and temporary paralysis of nerves results.

The foregoing seems to have met with favor in numerous quarters, and in one instance at least a surgeon of authority affirms that "its importance is all the more undoubted, seeing that if in a given case cold water alone should fail to produce the needful degree of insensibility, a weak and absolutely harmless solution of cocaine would prove certainly efficacious."

Whether true or false, it is hardly probable that surgeons will give up the use of cocaine, which is deemed certain, in favor of a method which will always be apt to carry with it a feeling of indefiniteness.—*Medical Age.*

Treatment of Pruritus Ani.

Dr. A. Berger states that the following method immediately relieves the itching and causes a rapid disappearance of the eczema of the perineum and scrotum which frequently exists in these cases: A cotton pledget 2 or 3 cm. ($\frac{3}{4}$ to $1\frac{1}{2}$ inches) in length and steeped in a 2 per cent. solution of hydrochlorate of lime is introduced into the anus. This pledget is allowed to remain until there is a slightly smarting sensation, when it is immediately withdrawn and the anal region washed with the same solution, taking care not to wipe it off afterward.—*Intern. Jour. of Surg.*

Chronic Hernia.

Dr. Bishop (*Lancet*) states:

1. That chronic and acute hernia are absolutely different things, agreeing only in the fact that they are both protrusions of viscera through their normal environments.

2. That they differ in etiology, pathology and course.

3. That, especially from the point of view of radical cure, it is important to distinguish between them.

4. That in discussing the feasibility of operations for radical cure, and especially the permanency of their results, the etiology of chronic hernia is of immense importance, since an operation for the cure of the results of the cause is almost certain to be useless while the cause remains in operation; and if the cause can be found, the patient may be moved to avoid it after the operation has been performed, in order that permanency may be rendered more probable.

5. That in the case of chronic hernia the cause is never one acting suddenly and singly, as overlifting, strains, falls, etc., but always acting slowly, persistently, gently, habitually (such causes are difficulties in urination and defecation, certain occupations, and, chiefly and most prominently, coughing in all its forms).

6. That the claims of any operation for radical cure of chronic hernia cannot at present be properly estimated, and that they never can be unless acute and chronic hernia are absolutely separated and the true effective causes of them are duly appreciated, other causes being previously carefully eliminated.

Renal Section in the Treatment of Certain Forms of Anuria.

At the meeting of the French Surgical Congress M. Picque, of Paris, said: "A woman having an inoperable cancer of the womb suffered for thirteen days from an absolute anuria which at last was accompanied by œdema and vomiting. The left kidney was of increased size. The anuria was evidently due to compression of the left ureter with reflex paralysis of the right kidney. I incised the left kidney and packed the wound with iodoform gauze. The urine escaped by this route and the symptoms of uræmia disappeared. The kidney was healthy. The patient's life was by this operation prolonged for several months, and the right kidney resumed its functions. Three years ago M. Pozzi had performed a similar operation in a case of obstruction of the ureter in consequence of a vaginal hysterectomy. The results were very satisfactory."

M. Broca stated that in a case of cancer of the bladder, simulating exactly a calculus of the left kidney and diagnosticated as such by M. Guyon, he had incised the organ and found the kidney healthy. The secretion of the urine by the right kidney was re-established, the loss of function upon that side having been reflex and dependent upon obstruction of the left ureter by the cancer. The patient was benefited by the error of diagnosis, and the results corresponded with those obtained by M. Picque.—*Le Bulletin Medical.*

OBSTETRICS.

Hemorrhage in Pregnancy.

Cases are by no means rare where slight hemorrhage, or something resembling menstrual flux, occurs at the time for the regular catamenial period for the first two months of pregnancy, and in some cases extends during the entire period. This condition does not necessarily indicate placenta prævia, for where that exists Playfair says the hemorrhage rarely begins before the end of the sixth month, and sometimes not till labor has commenced. Depaul, in 70 cases, says in 1 case only the hemorrhage occurred before the sixth month; in 7 from six to seven months; in 12 from seven to eight months; in 26 from eight to nine months; and in 24 at term or near. A month before actual labor it is not unusual for slight pains, resembling labor pains, to occur at regular intervals, even with the slight appearance of blood. Of course in these cases the strictest rest should be enjoined and, if necessary, some remedy used to check the pain.—*N. Y. Med. Times.*

NOSE AND THROAT.

Spray for the Nose and Throat.

In Part Second of "Saunders' Question Compends," No. 14, second edition, just issued, Dr. E. B. Gleason recommends for the purpose of spraying the nose and throat the following formula: Antipyrin, grs. xvj; aquæ, fl. ʒ j.

He says: A solution of antipyrin of the above strength, when sprayed upon the mucous membrane of the nose, pharynx or larynx, has the power of contracting the capillaries and producing an artificial anemia, which effect is maintained for three to five hours. The above solution may be used with the atomizer in all acute inflammations of the mucous membrane of the upper respiratory tract. When used after the application of cocaine to the interior of the nose, it will maintain the contractile effect of that drug upon the rectile tissue for several hours; when sprayed upon the nasal mucous membrane without the previous application of cocaine, it gives rise to a smarting sensation, which, however, quickly subsides. Applied as a spray within the larynx by means of an atomizer, it contracts the blood-vessels of the laryngeal mucous membrane and diminishes secretion, cough and expectoration. It is extremely valuable as a remedy for the night cough of laryngitis phthisica, often securing a night's rest for such patients, who may be provided with an ordinary hand-atomizer filled with a solution of antipyrin and instructed to inhale its spray as often as is required to control the cough.

GYNECOLOGY.

Palliative Treatment of Uterine Cancer.

Boldt (*Archiv. of Gyn.*), speaking of cases where operation is impracticable as the malignant deposit cannot be removed entire, recommends as the best form of treatment curetting and subsequent cauterization. Curetting and packing with pledgets saturated with chloride of zinc will also prove beneficial. If rigid antiseptic precautions be

taken, piercing of the uterus by the curette may do no harm. The uterus is first curetted, then the cavity is repeatedly sponged with a mixture of commercial acetic acid (1 dram), glycerine (8 drams) and carbolic acid (20 grains). Lastl y the cavity is packed with absorbent wool.

Cauterizing Ovaries Instead of Removal of Them.

Dr. Pozzi, at Hopital Broca, has now practiced cauterization of painful ovaries for over two years, and considers the plan very successful. In one case, in which he operated upon both ovaries, the woman has since given birth to a child. He performs his laparotomies in the ordinary recumbent position; draws the ovaries out of the abdominal opening. If the ovary is totally diseased he removes it, but if a part is found to be healthy he amputates the affected portion, cauterizes the stump, then sews the end with silk. If there are some small cysts he opens them by touching with the Paquelin point. The ovary being returned to the abdomen, he examines and treats the other in a similar manner. Often as many as six small cysts are opened in this way in each ovary.—*Paris Cor. Ther. Gaz.*

Pelvic Examinations in Stout Women.

Abdominal palpation is usually not a difficult procedure in thin women with flaccid muscles, but in the stout it is not an easy matter to map out any condition of the uterus or ovaries. Dr. Harris A. Slocum explains in the *Philadelphia Polyclinic* a method of palpation to be used in the most obese. He has noticed even in the stoutest women a narrow zone where the fat in the abdominal muscles is very spare and through which examinations may be made with the greatest satisfaction. The fat on the abdominal wall is thickest in the region of the umbilicus, thinning off toward the flanks.

Here, he says, a careful examination will show in any woman a depressed, curved line running from one anterior iliac spine to the other, with its convexity toward the mons veneris. At and near this groove little fat will be found. By placing the finger-tips in this groove and depressing, the abdominal organs may be felt and the fat may be pushed before the hand and kept out of the way. In intestines distended with gas or when the corset or dress is tight, this manipulation cannot be well carried out. Everything should be loosened and the most comfortable position assumed, when the examination will be much easier than usual in stout women.

PHYSIOLOGY.

The Process of Going to Sleep.

"Order is heaven's first law," and the truth is manifested even in the process of going to sleep. When a man drops off to sleep his body does not do so all at once, so to speak. Some senses become dormant before others, and always in the same order. As he becomes drowsy the eyes close and the sense of seeing is at rest. It is quickly followed by the disappearance of the sense of taste. He next loses the sense of smell, and then, after a short interval, the tympanum becomes insensible to sound, or rather the nerves which run to the brain from it fail to arouse any sense of hearing. The last sense to leave is that of touch, and in some hypersensitive people it is hardly ever dormant. Even in their case, however, there is no discriminating power or sense of what touched them. This sense is also the first to return upon awakening. Then hearing follows suit, after that taste, and then the eye becomes able to flash impressions back to the brain. The sense of smell, oddly enough, though it is by no means the first to go, is the last to come back. The same gradual loss of power is observed in the muscles and sinews as well as in the senses. Slumber begins at the feet and slowly spreads up the limbs and trunk until it reaches the brain, when unconsciousness is complete and the whole body is at rest. This is why sleep is impossible when the feet are cold.—*Cincinnati Med. Jour.*

The Physiological Effects of Cycling.

The physiological effects of cycling have recently been studied by Dr. Blazhevitch, of St. Petersburg, who publishes his results in his "Graduation Dissertation" (*Med. Rec.*). He tabulates 270 observations on 104 individuals of both sexes and various ages, distinguishing between ordinary riders and those who train themselves for and ride in races or attempt to cover long distances. He finds that the play of the chest is diminished immediately after riding, especially in the cases of women and children and of men racing or commencing cycling, the diminution amounting in these cases to from 1 to 1.5 cm. In men accustomed to the exercise the effect was scarcely perceptible. The general effect of the summer's riding upon the male votaries of the sport was, according to Dr. Blazhevitch, practically nothing. In women and children the effect was slightly to increase the vital capacity. The arm power was found to have increased more than the leg power in young persons and in beginners, but in the case of men of mature age who had previously been accustomed to cycling this was not so evident. Speaking generally, the effects of cycling on the system were found to be very similar to the phenomena noticed by Tsymkovski in soldiers who had been running and by Gruzdeff and Passover as resulting from rowing.

Function of Ciliated Epithelium of the Tubes.

Dode's experiments seem to carry out the theory of Tait as to ectopic pregnancy being the result of former tubal trouble with the destruction of the ciliated epithelial lining (*Arch. f. Gynek.*). He injected an emulsion of charcoal into the abdomen of a rabbit'

and after several hours found the tubes filling with the particles of the charcoal. He then used the ova of the Ascaris lumbricoides Suis, injecting them into the abdominal cavity. In twelve hours large numbers of these ova could be seen in the tubes. This seems to prove that the ciliary currents cause ova not only to go from the ovary directly to the uterus, when the fimbriated extremity of the tubes has received it directly from the ovary, but that in case it escapes into the abdomen a like course will be taken, and uterine pregnancy is impossible if the tubes are normal.

BACTERIOLOGY.

What We Are Coming To.

(Public School, first grade, A.D. 1905.)

Teacher (to applicant for admission)—"Johnnie, have you got a certificate of vaccination for small-pox?"

"Yes, sir."

"Have you been inoculated for croup?"

"Yes, sir."

"Been treated with diphtheria serum?"

"Yes, sir."

"Had your arm scratched with cholera bacilli?"

"Yes, sir."

"Have you a written guarantee that you are proof against whooping-cough, measles, mumps, scarlet fever and old age?"

"Yes, sir."

"Have you your own private drinking-cup?"

"Yes, sir."

"Do you promise not to exchange sponges with the boy next to you and never use any but your own pencil?"

"Yes, sir."

"Will you agree to have your books fumigated with sulphur and sprinkle your clothes with chloride of lime once a week?"

"Yes, sir."

"Johnnie, you have met the first requirements of the modern sanitarians and may now climb over yonder rail, occupy an isolated aluminium seat and begin making P's and Q's as your first lesson."—*Times and Register.*

Recent Discoveries in Relation to Bacteria.

Dr. Edward Long Fox, in his admirable address as president of the British Medical Association, at its recent annual meeting, summed up some of the most important recent advances in the science of bacteriology as follows:

"It is well known now that abscesses caused by staphylococci have a tendency to remain localized, while those from streptococci are often followed by metastatic abscesses, as in erysipelas, puerperal fever and ulcerative endocarditis. We know now that the tubercle bacillus is found in chronic bone disease; and that if this bacillus exists alone, the disease is a chronic one, while if the streptococcus pyogenes is present also, the disease is more quickly fatal; that the suppurations accompanying tuberculosis are due partly to the tubercle bacillus itself, or rather to the poisons resulting from the action of that bacillus, but partly also to other micro-organisms; that the bacillus diphtheriæ is found chiefly on the surface of the false membrane, and that the fatality of that disease depends on the poison secreted by the bacillus diphtheriæ, while the presence of streptococci renders the disease more grave, the increased virulence being due to the existence of both these organisms together.

"We find that acute pneumonia is caused by the pneumococcus of Talamon-Fraenkel, although often associated with the streptococcus pyogenes. This pneumococcus, too, may produce abscesses in patients free from pneumonia, as in purulent pleurisy, ulcerative endocarditis and suppuration of the nasal fossæ. The fact that this microbe exists in the saliva of healthy people proves that these diseases have also a non-microbial element. Some condition of the sympathetic, influencing the caliber of the blood-vessels, or some morbid condition of the vagus or of the accelerator nerves, or some inherited vulnerability, with all its possibilities, must probably be precedent factors.

"The typhoid bacillus is often accompanied by other micro organisms, especially the streptococcus pyogenes or the staphylococcus aureus and albus."—*Mod. Med.*

NEWS AND MISCELLANY.

Reduced Rates for Christmas and New Year's.

The B. & O. R. R. Co. announces that excursion tickets will be sold between all stations on its lines east of the Ohio River during Christmas and New Year holidays, at reduced rates, for all trains December 22, 23, 24, 25, 29, 30, 31, and January 1, 1895, valid for return passage until January 3, 1895, inclusive.—3t

1 GHL 32f